

SACOG-08-019

HE  
310  
.S12  
S125  
2008  
IGSL

SACRAMENTO AREA COUNCIL OF GOVERNMENTS

# A Creative New Vision

FOR TRANSPORTATION IN  
THE SACRAMENTO REGION

SACRAMENTO REGION

**MTP2035**

METROPOLITAN TRANSPORTATION PLAN

THE NEXT STEP IN BLUEPRINT



STATE OF CALIFORNIA  
LIBRARY

8  
SACRAMENTO  
CALIFORNIA



# Board Members

As of plan adoption on March 20, 2008

|                                                 |                                         |                                                          |
|-------------------------------------------------|-----------------------------------------|----------------------------------------------------------|
| Tom Cosgrove (Chair)<br>City of Lincoln         | Roger Dickinson<br>Sacramento County    | Susan Peters<br>Sacramento County                        |
| Helen Thomson (Vice Chair)<br>Yolo County       | Rusty Dupray<br>El Dorado County        | Gene Resler<br>City of Isleton                           |
| Harold Anderson<br>City of Winters              | Heather Fargo<br>City of Sacramento     | Rocky Rockholm<br>Placer County                          |
| Ruth Asmundson<br>City of Davis                 | David Flory<br>City of Woodland         | Walt Scherer<br>Town of Loomis                           |
| James Barrington<br>City of Wheatland           | Jim Gray<br>City of Roseville           | Donald Schrader<br>Yuba County                           |
| Christina Billeci<br>City of Marysville         | Lauren Hammond<br>City of Sacramento    | James Shelby<br>City of Citrus Heights                   |
| Sherrie Blackmun<br>City of Colfax              | Kevin Hanley<br>City of Auburn          | Dan Silva<br>Sutter County                               |
| Linda Budge<br>City of Rancho Cordova           | Peter Hill<br>City of Rocklin           | Jody Jones<br>(Ex-Officio Member)<br>Caltrans District 3 |
| Christopher Cabaldon<br>City of West Sacramento | Diane Hodges<br>City of Live Oak        |                                                          |
| Darryl Clare<br>City of Galt                    | Roberta MacGlashan<br>Sacramento County |                                                          |
| Robby Colvin<br>City of Placerville             | Leslie McBride<br>City of Yuba City     |                                                          |
| Jim Cooper<br>City of Elk Grove                 | Steve Miklos<br>City of Folsom          |                                                          |

# Member Jurisdictions

|                        |                        |                         |
|------------------------|------------------------|-------------------------|
| El Dorado County       | City of Elk Grove      | City of Rocklin         |
| Placer County          | City of Folsom         | City of Roseville       |
| Sacramento County      | City of Galt           | City of Sacramento      |
| Sutter County          | City of Isleton        | City of West Sacramento |
| Yolo County            | City of Lincoln        | City of Wheatland       |
| Yuba County            | City of Live Oak       | City of Winters         |
| City of Auburn         | Town of Loomis         | City of Woodland        |
| City of Citrus Heights | City of Marysville     | City of Yuba City       |
| City of Colfax         | City of Placerville    |                         |
| City of Davis          | City of Rancho Cordova |                         |

# Table of Contents

|                                                                             |     |
|-----------------------------------------------------------------------------|-----|
| <i>Chapter 1:</i><br>Need for a New Plan .....                              | 1   |
| <i>Chapter 2:</i><br>Summary of Budgets and Investments .....               | 9   |
| <i>Chapter 3:</i><br>Paying for the Plan and<br>Implementing Projects ..... | 37  |
| <i>Chapter 4:</i><br>Summary of Plan Performance .....                      | 45  |
| <i>Chapter 5:</i><br>Policies and Supportive Strategies .....               | 65  |
| <i>Chapter 6:</i><br>The Planning Process .....                             | 85  |
| <i>Chapter 7:</i><br>Smart Land Use .....                                   | 91  |
| <i>Chapter 8:</i><br>Environmental Sustainability .....                     | 105 |
| <i>Chapter 9:</i><br>Equity and Choice .....                                | 121 |
| <i>Chapter 10:</i><br>Economic Vitality .....                               | 137 |
| <i>Chapter 11:</i><br>Access and Mobility .....                             | 155 |
| <i>Chapter 12:</i><br>Financial Stewardship .....                           | 167 |





# A Creative New Vision

F O R   T R A N S P O R T A T I O N   I N  
T H E   S A C R A M E N T O   R E G I O N

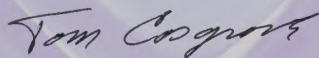
In the six years since the last Metropolitan Transportation Plan, the Sacramento region has started a transformation. Through the Blueprint growth strategy and the development of a new transportation plan based on this new, smarter growth development pattern, we have set a course to fundamentally change the future of the region.

No longer will the primary pattern of growth move further away from existing downtowns, neighborhoods, shopping and business centers. Instead, we will focus on building up and around the strong assets we already have throughout our region.

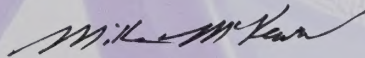
The transportation investments in this plan mirror and support this development pattern, with significant increases in funding for public transit, pedestrian and bicycle trips, and shorter and more local car trips, complemented by targeted road capacity investments.

The impact of this shift is clear: breaking the persistent rise in congestion, a major increase in travel options other than one person driving in a car, and reductions in air emissions, including greenhouse gases, on a per person basis.

Nearly 8,000 citizen planners, elected officials and planners from the 22 cities and six counties worked for over two years to develop this plan. We hope individuals will continue to be engaged in their communities as our regional vision comes to life.



**Tom Cosgrove**  
Chair

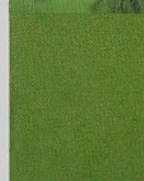


**Mike McKeever**  
Executive Director

HE310  
S12 S125  
2008  
IGSL

## SACOG MISSION

DELIVERING  
TRANSPORTATION  
PROJECTS;  
PROVIDING PUBLIC  
INFORMATION  
AND SERVING  
AS A DYNAMIC FORUM  
FOR REGIONAL  
PLANNING AND  
COLLABORATION IN THE  
GREATER SACRAMENTO  
METROPOLITAN AREA.





C H A P T E R 1 —  
I N T R O D U C T I O N

# Need for A New Plan



THIS IS THE FIRST  
METROPOLITAN  
TRANSPORTATION PLAN  
TO BE SIGNIFICANTLY  
INFLUENCED BY  
BLUEPRINT GROWTH  
PRINCIPLES. THE  
LAND USE PATTERN  
THAT FORMS THE  
FOUNDATION FOR  
THE MTP2035 IS  
BASED ON THE POLICY  
DIRECTIONS CITIES  
AND COUNTIES ARE  
PURSUING AS WELL  
AS THE ESTIMATED  
PERFORMANCE OF THE  
MARKET.



With 2.1 million people in our region and another one million projected by 2035, moving within and between communities is becoming an increasingly difficult challenge. Adding 525,000 new homes and 535,000 new jobs to our region, one might expect increased traffic congestion, dirtier air and longer commute and travel times.

The Metropolitan Transportation Plan for 2035 links land use and transportation planning, with \$42 billion<sup>1</sup> in transportation investments in the six-county Sacramento region over the next 28 years. With strategic investments in our current transportation system, we can curb the growth in traffic congestion each household experiences. We can create opportunities for residents of the region to spend less time in their cars and protect our air quality while improving the quality of life.

In 2002, the most recent major MTP update was completed. The plan had notable successes, including the creation of regional funding programs supporting air quality, community design, transportation demand management and bicycling and walking. However, despite our best efforts at dedicating more than \$22 billion<sup>2</sup> for improvements through 2025, research shows traffic congestion levels per household would still increase by some 58 percent over today's levels. The location of housing relative to jobs was not balanced around the region, with three primary job centers in downtown Sacramento, Rancho Cordova and Roseville supporting low-density suburban housing across several hundred square miles in our six-county region.

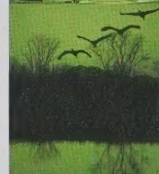
## BLUEPRINT VISIONING PROJECT

Aware of the need for change, in 2002 the Sacramento Area Council of Governments (SACOG) undertook the Blueprint visioning project, working collaboratively with civic partner Valley Vision and 5,000 residents, community leaders and elected officials to study future land use patterns and their potential effects on the region's transportation, air quality, housing, open space and other resources.

Through a series of community workshops, "citizen planners" discovered how we can reduce our air pollution emissions, reduce traffic congestion and reduce our projected land consumption from urban development. Workshop participants told SACOG how they envisioned the future of their communities; SACOG staff examined these ideas using computer models, which showed that implementing smart growth principles would shorten commute times, reduce traffic congestion, lessen dependence on automobiles and provide for a range of housing choices affordable to the workforce and more aligned with the needs of an aging population.

The Preferred Blueprint Scenario unanimously adopted by the SACOG Board of Directors in December 2004, calls for development based on seven smart growth principles: providing a variety of transportation choices; offering housing choices and opportunities; taking advantage of compact development; using existing assets; mixed land uses; preserving open space, farmland and natural beauty through natural resources conservation; and encouraging distinctive, attractive communities with quality design.

By linking land use and transportation planning, and bringing jobs, housing and retail closer together, computer traffic modeling revealed that strategic transportation investments can significantly improve our travel by increasing transit, walk and bike trips, shortening our remaining car trips and reducing the time we spend in heavy traffic congestion.





Public opinion surveys continue to show that residents value their communities highly. In 2004, residents of the Sacramento region indicated they liked living in the region because of its variety and availability of services and activities, slower pace of life, small-town feeling, and sense of community and belonging. In 2007, when asked what they liked about living in the region, respondents again indicated appreciation for access to retail, services and entertainment and the outdoors, as well as a small-town feel. Given these values, it is not surprising that growing congestion and lack of accessibility is a big concern.

### THE NEXT STEP IN BLUEPRINT

Drawing on community interests and the SACOG Board's support, this is the

first Metropolitan Transportation Plan to be significantly influenced by Blueprint growth principles. The Blueprint is a voluntary strategy that relies on the individual actions of local governments for successful implementation. The land use pattern that forms the foundation for the MTP2035 is based on the policy directions cities and counties are pursuing as well as the estimated performance of the market. The market performance is influenced by state and federal regulations as well as local policies and codes.

The land use pattern for the MTP2035 is much more closely aligned with Blueprint growth principles than was the land use pattern for the prior MTP. This is because many of SACOG's members have chosen to actively implement the voluntary growth strategy, and the real estate market is also headed in a direction that in many ways is consistent with these principles. This is especially true for the increasing variety of available housing products, more compact development, and increased infill and redevelopment.

With the assumption that the land use base in this plan will be implemented, the MTP2035 invests a far greater





share of transportation resources in alternative modes and trip reduction than any previous MTP. This balance of transportation investments will best serve a more compact land use pattern with the effect of shortening trips and improving air quality. In addition to investing directly in these travel modes and in transportation demand management programs such as rideshare and employer programs, the MTP2035 also provides for carpool/express bus lanes on freeways, bridges and river crossings that shorten distances for bicyclists, and “complete streets” that safely accommodate vehicles, transit, bicyclists and pedestrians.

The MTP2035 outlines the region’s transportation needs, sets principles and policies, and proposes specific strategies. It is designed to coordinate and manage future transportation improvements among the various jurisdictions and agencies operating within the region. The MTP covers a wide range of transportation issues, including how the land use pattern affects travel behavior, development of multiple modes of transportation, rush-hour congestion, special needs of people with limited mobility, goods movement, long-distance travel between the SACOG region and other areas, and the environmental impacts related to travel. The MTP2035 is designed to guide future transportation investment decisions in a balanced manner, sufficient to make needed improvements in all modes of surface transportation, within the limits of resources.

## NEED FOR A NEW PLAN

**The six-county Sacramento region has changed dramatically in many ways since 1975, and we can expect equally dramatic changes looking forward to 2035. Back in the mid-1970s, the regions’ population had reached about 1.1 million.** The only major job center was found in downtown Sacramento. The regional transportation system, focused on radial access between suburbs and downtown Sacramento, consisted of freeways designed in the 1960s with twenty years of spare capacity. By the mid-1970s, the region had decided not to expand the freeway system further, and instead built two new radial light rail lines, completed by the mid-1980s. Surrounding



communities of that time—Elk Grove, Davis, Woodland, Yuba City, Marysville, Roseville, and Folsom—enjoyed easy access to and from Sacramento, even on two-lane roads. Daily traffic congestion was essentially non-existent.

## GROWTH AND ITS LOCATION

Today, the region has evolved in ways unforeseen even ten years ago and—in spite of a recent slowdown—is expected to continue to grow at a high rate through 2035. Two-worker households have become the norm, with extensive commuting from one community to another. Current low density suburban land use patterns mean people travel overwhelmingly by automobile: 82 percent of trips are drive-alone, 10 percent of trips go by auto with two or more occupants, 5 percent are bicycle or walk trips, and 3 percent of trips are by transit.

Projections show that on top of the existing 1 million jobs and 800,000 hous-







ing units in 2005, the region is expected to add 535,000 new jobs and 525,000 new housing units between 2005 and 2035.

Due to the region's commitments to a different future land use pattern that follows smart growth principles, most of the new growth projected in the region is well-balanced between jobs and housing in community areas—aside from three major new housing areas. Where the growth increment tilts either way, it tends to lead toward better jobs-housing balance from 2005 conditions.

By 2035, the percentage of housing without jobs in the same community declines by 30 percent, and new significant housing areas are closer to the region's main job centers in downtown Sacramento, Rancho Cordova and Roseville. As a consequence, the average

commute can be shorter, commuters will spend less time in traffic, and the rapid growth of peak-period congestion in effect since 1995 will slacken.

## A NEW TRANSPORTATION VISION

Sacramento needs a creative new transportation vision to match changing land development patterns, emerging commute patterns, and the overall growth in travel. Greater congestion, more compact development, an aging population, clean-air goals, and energy conservation all point to a need to improve and expand transit service. The Sacramento region, with ideal climate and terrain, could see more travel by bicycling and walking, now discouraged in some communities by heavy local auto traffic and discontinuous access. With more than a million empty seats in autos, but fewer than 10,000 empty seats in buses every morning and afternoon, carpools clearly have a place in the picture. Regardless, a large increase in the amount of travel by 2035 means that, even if transit use could be increased tenfold and bicycle/walk trips tripled, the region still would face a large increase in travel by auto. At least in some places the road system must be expanded too, and if planned comprehensively, road expansions can improve bicycle and bus circulation.

Since 1970, our population has increased 110 percent and our vehicle miles traveled have increased 190 percent, while space on our roads has only increased 30 percent. This plan takes these realities into account, along with an estimate of what the region can afford, and offers a balanced vision for transportation in the regions' future.

In that context, SACOG through this plan gives primary priority to transit expansion, with the objective of an effective transit system that both serves those who rely on transit and attracts riders who also have the choice to drive. The plan proposes to invest the maximum feasible share of the region's flexible capital funding into transit expansion, commensurate with funding to operate and need for road capacity for transit to run on. This investment approximately triples the amount of transit available in 2035 compared to



today; there are no funds available to operate more service beyond that level, and a modest amount of flexible funds must be invested in road improvements so that transit can move effectively through areas of congested traffic.

**Some factors that must be considered in this vision are:**

■ **Clean Air:** Total smog emissions from motor vehicles are now half what they were in 1980, because technology has reduced auto emissions by 98 percent, comparing 1980 models to 2007 models. Still, ever-higher standards for clean air combined with the growth in travel mean that reduction in motor-vehicle emissions must continue.

■ **Demographic Changes:** By 2035, the number of residents in the SACOG region age 55 and over is expected to grow dramatically. According to California Department of Finance projections, the number of people age 55 or older will increase by approximately 580,000 a 153 percent increase between 2000 and 2035. As the population ages, older drivers will seek out other forms of transportation, as driving may not be a feasible option.

■ **Gas Prices:** Adjusted for inflation, gasoline prices have increased to the highest level since 1980, while the region's population has increased by about 55 percent and the total miles of driving has increased by 120 percent. Recent gas prices of \$4 per gallon and higher start to affect people with

lower incomes and cut into driving and quality of life. At the same time, many people do not have good alternative options to driving.

■ **Better Transit:** Lack of road building and the resulting congestion have not encouraged many people to take transit instead of driving, even at the extreme congestion levels seen in big cities like Los Angeles. Instead, drivers move onto neighborhood streets, seeking to avoid heavy traffic. A 1999 Sacramento Regional Transit survey showed that half of those who commute on transit, and three-quarters of those who ride transit for other reasons, do not have access to an auto. Furthermore, those percentages rose through the 1990s, so transit to date has increasingly served those who do not have the choice to drive, despite a focus on luring drivers out of their autos.

■ **Neighborhood Quality of Life:** Too many drivers cut through parallel neighborhood streets to avoid traffic jams on major arterials, and too often drive at arterial speeds. These streets become





less safe and less pleasant as a place for community interaction, especially in areas with discontinuous sidewalks and without bike lanes. When areas are chopped up by cul-de-sacs and gated and walled communities, those who would walk or bicycle must go the long way around, and fewer children can walk to school. This environment encourages people to drive all the time.

■ **Goods Movement:** The amount of freight shipped by truck has tripled since 1980. Trucks often serve as rolling warehouses feeding just-in-time manufacturing and stores with computerized inventories. Rail transportation is not efficient or profitable for trips that are less than 700 to 1,000 miles, and suburban factories are often not located on rail lines. The

region's location at the crossroads of northern California's major interstate and state routes means that we need to accommodate large volumes of trucks traveling through the region in addition to trucks making local deliveries. Even so, about 85 percent of trucks moving around and through the Sacramento region to load or unload locally or never leave the region.

■ **Climate Change:** Although a discussion of the impacts of climate change is not currently required by the California Environmental Quality Act (CEQA) statutes or guidelines, it is the view of the State Legislature (as expressed in its adoption of Assembly Bill 32, The California Global Warming Solutions Act of 2006) and the Governor (through the issuance of Executive Order #S-3-05) that climate change poses significant adverse effects to the environment of California and the entire world, and that mitigation measures are needed to limit these impacts. A more in-depth discussion is provided in Chapter 9 of the EIR.





■ **Oil Consumption:** The consumption of nonrenewable energy (primarily gasoline and diesel fuel) associated with construction activities and the operation of passenger, public transit, and commercial vehicles results in greenhouse gas (GHG) emissions that ultimately result in climate change. Alternative fuels such as natural gas, ethanol, and electricity (unless derived from solar, wind, nuclear, or other energy sources that do not produce carbon emissions) also result in GHG emissions and contribute to climate change.

■ **Public Health and Safety:** The federal and state governments each establish ambient air quality standards for several criteria pollutants. Most of the standards have been set to protect public health. There is a considerable body of data linking adverse health effects with traffic generated pollutants generated by motor vehicles. Further discussion on how air quality affects public health is provided in Chapter 6 of the EIR.

Several programs and studies (Safe Routes to Schools/Transit, Community Design and Complete Streets) will help increase public safety and walking and biking. These modes benefit public health by providing good exercise, are energy efficient, and are viable alternatives to driving alone. Further discussion on these topics can be found in Chapter 18 of the EIR. Chapter 5 of the MTP contains numerous policy strategies designed to promote and increase public health and safety. Appendix C7 highlights the specific policies and strategies from Chapter 5 that pertain directly to public health and safety.

Residents of the Sacramento region have given input on how they want to move within and among communities in the years and decades ahead. The public indicated in community workshops, the regional TALL Order forum, and public opinion research that they wanted a balance of investments with priorities for smarter land use, increased transit, better connections with transit, freeway enhancements and bicycle paths throughout the region. They also ranked road maintenance as a high priority.

Projects identified throughout the MTP development process were run through travel performance modeling soft-



ware, and the resulting project list meets the criteria for regional priorities and higher performance. With these projects in place, we can expect to reduce vehicle miles traveled per household and hold congestion per household to a 10 percent increase. In the previous MTP, adopted in 2002, vehicle miles traveled were expected to increase, along with a 58 percent increase in traffic congestion per household. This plan is also significant, because it is the first to link transportation planning and the Blueprint Preferred Growth Scenario, bringing jobs, housing and services closer together.

---

*MTP revenues are reported in current-year dollars, but are reported here escalated for future years. Escalated revenue assumptions are reported in Appendix B2; Appendices A1 and A2 contain escalated costs for the project lists. The methodology for calculating escalated costs and revenues is in Appendix B1.*

<sup>1</sup>\$72 billion in escalated revenues

<sup>2</sup>\$37 billion in escalated revenues



C H A P T E R 2

# Summary of Budget AND Investments



THE METROPOLITAN  
TRANSPORTATION PLAN  
OFFERS A BALANCE  
OF INVESTMENTS  
FOR A VARIETY OF  
TRANSPORTATION  
CHOICES, FROM  
IMPROVING ROAD  
MAINTENANCE AND  
SAFETY TO BUILDING  
COMPLETE STREETS  
WITH ACCESS FOR  
PEDESTRIANS,  
BICYCLISTS, CARS  
AND TRANSIT.



The MTP2035 foresees nearly \$42 billion in revenues, on average almost \$1.5 billion per year for 28 years, with \$6.8 billion of that as federal funds coming to the region for regional-scale improvements. Of the \$42 billion, the MTP2035 budget shows that about **a quarter goes to operate transit services**—not enough to provide the level of transit service needed in a region that will have over three million residents. **Another quarter goes to maintain streets, roads, and highways**—again, not enough to provide adequate maintenance especially in more rural areas of the region. Essentially, the remaining half is not eligible for operating and maintenance costs and must be used for capital improvements. In escalated revenues, the MTP2035 foresees \$72 billion in revenues, on average, \$2.6 billion per year with \$11.5 billion as federal funds coming for regional-scale improvements:

- **First, \$14.3 billion (\$24.6 billion in escalated costs) goes to transit investments**, including rail extensions and a 170 percent increase in bus service hours. An estimated \$4.2 billion (\$7.2 billion in escalated costs) in capital investments support the additional \$10.1 billion (\$17.4 billion in escalated costs) needed to operate these transit services.

- **Second, \$2.9 billion (\$5.0 billion in escalated costs) goes to state highway improvements**, mainly to complete four-lane highways to connect the northern counties with the rest of the region and add carpool lanes to urban freeways.

- **Third, \$8.3 billion (\$14.3 billion in escalated costs) goes to local road improvements**, including intersection improvements, safety projects, signal timing, road widening in growth areas, and new connections for local access.

- **Fourth, \$1.4 billion (\$2.4 billion in escalated costs) goes to exclusively bicycle and pedestrian improvements**, including bicycle trails, sidewalks, ADA retrofits, and supporting facilities. In addition, 25 percent of the road capital projects have a bicycle or pedestrian feature that is not included in the \$1.4 billion total.

- **Finally, this plan proposes to use \$2.3 billion (\$4.0 billion in escalated costs) for other types of improvements important to achieving regional goals:** community design incentives, travel demand management (including the regional rideshare program), clean air, open space, technology deployment, and enhancement programs.

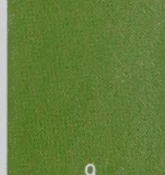
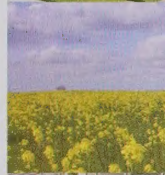
## INVESTMENT SUMMARY OF THE MTP2035

The MTP2035 investment list consists of two basic elements:

- **A “revenue-constrained element,”** which includes projects supported by revenues that are reasonably expected to be available during the 28-year planning period, as required by federal metropolitan transportation planning guidance.

- **A “plus 10 percent” increment of investments** that is generally 10 percent above the revenues projected for the revenue-constrained plan.

What follows is a summary of these investments. Table 2-1 compares the investments in broad categories with the investment levels in the last major MTP update. Table 2-2 summarizes the major capital projects contained in the MTP2035, while Figures 2-1 through 2-3 illustrate key regional rail, bus, and freeway investments. The full list of projects contained in the plan is provided in Appendix A1 and A2.





**TABLE**  
**2-1**

**MTP2035 Budget Summary Compared to MTP2025**  
*Current-Year Dollars*

| PROGRAM CATEGORY                                                                                                                                             | MTP2035<br>(in billions) | % higher than<br>MTP2025 | MTP2025<br>(in billions) |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------|--------------------------|--------------------------|
| <b>Road Maintenance and Rehabilitation</b><br>Maintain Caltrans highways and freeways<br>Maintain local roads and streets<br>Safety                          | \$12.4                   | 17%                      | \$10.6                   |
| <b>Road Capital Projects</b><br>New/widened roads, bridges, interchanges, etc.                                                                               | \$11.3                   | 2%                       | \$11.1                   |
| <b>Transit</b><br>Maintain existing bus and light rail<br>Strategic bus and rail expansion<br>ADA/paratransit service                                        | \$14.3                   | 21%                      | \$11.8                   |
| <b>Bicycle/Pedestrian</b><br>Bicycle facilities<br>Pedestrian improvements<br>ADA retrofits                                                                  | \$1.4                    | 56%                      | \$0.9                    |
| <b>Programs and Planning</b><br>TDM and traveler information<br>Community Design<br>Air Quality<br>Technology<br>Landscaping and transportation enhancements | \$2.3                    | 35%                      | \$1.7                    |
| <b>GRAND TOTALS</b>                                                                                                                                          | <b>\$41.7</b>            | <b>16%</b>               | <b>\$36.1</b>            |



## NEW TRANSIT

|                         |                                                                                                                            |
|-------------------------|----------------------------------------------------------------------------------------------------------------------------|
| <b>Transit Strategy</b> | <b>Emphasize widespread and frequent bus service on arterial streets with new services and strategic rail investments.</b> |
|-------------------------|----------------------------------------------------------------------------------------------------------------------------|

## NEW RAIL

|                                  |                                                                                                                                                                                                                                                                                                                                                                 |
|----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Heavy Rail</b>                | <ul style="list-style-type: none"> <li>• At least two more Capitol Corridor trains daily with track improvements</li> <li>• Additional San Joaquin rail services</li> </ul>                                                                                                                                                                                     |
| <b>Light Rail and Streetcars</b> | <ul style="list-style-type: none"> <li>• South Line extension to Cosumnes River College</li> <li>• Gold and Blue Line track improvements for increased peak-period frequencies</li> <li>• Downtown Sacramento to Natomas to Sacramento International Airport</li> <li>• Downtown Sacramento to West Sacramento</li> <li>• Rancho Cordova Town Center</li> </ul> |

## NEW BUS

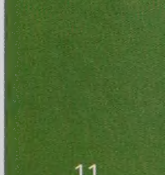
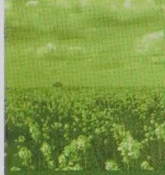
|                                 |                                                                                                                                                                                                                                                                                                                                                                     |
|---------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Local Buses and Shuttles</b> | <ul style="list-style-type: none"> <li>• 2035: 82 of 133 bus lines (62%) with 10-30 minute peak-period service</li> <li>• 2035: 22 neighborhood shuttles</li> <li>• Increased ADA paratransit service</li> </ul>                                                                                                                                                    |
| <b>Bus Rapid Transit</b>        | <ul style="list-style-type: none"> <li>• 2035: 10 lines with 15-30 minute service connecting Roseville, Rocklin, Folsom, eastern Sacramento County, Citrus Heights, Natomas, northern Sacramento County, Rancho Cordova, south Sacramento, Elk Grove, downtown Sacramento</li> <li>• Watt Avenue and Sunrise Avenue with busways at U.S. 50 interchanges</li> </ul> |
| <b>Express Bus</b>              | <ul style="list-style-type: none"> <li>• 15 of 41 lines (37%) with 20-30 minute service on freeways</li> <li>• Eight of 41 lines (20%) with 31-45 minute service on freeways</li> </ul>                                                                                                                                                                             |

## NEW BRIDGES

|                         |                                                                                                                                                                                                                                                                                                         |  |
|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| <b>Sacramento River</b> | New Sacramento River Crossing (transit, auto, bike and pedestrian) connecting downtown Sacramento and West Sacramento                                                                                                                                                                                   |  |
| <b>Feather River</b>    | <ul style="list-style-type: none"> <li>• 5th Street Bridge rebuilt/widened to six lanes</li> <li>• 10th Street Bridge widened to six lanes</li> </ul>                                                                                                                                                   |  |
| <b>American River</b>   | <ul style="list-style-type: none"> <li>• New American River Bridge below Folsom Dam</li> <li>• Hazel Avenue and Howe Avenue bridges expanded to six lanes</li> <li>• New Lower American River Crossing (transit, auto, bike and pedestrian) connecting downtown Sacramento and south Natomas</li> </ul> |  |

## NEW BICYCLE AND PEDESTRIAN

|                                        |                                                                                                                                                                                                                                                                                                                                           |
|----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Bicycle and Pedestrian Strategy</b> | <p>Create a network of bicycle and pedestrian routes between, through, and within all cities and towns of the six county region.</p> <p><i>Appendix A2 contains 104 bicycle and pedestrian facility improvements.</i></p> <p><i>Appendix C2 lists projects contained in the Regional Bicycle, Pedestrian, and Trails Master Plan.</i></p> |
|----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|





## NEW ROADS

| Road Strategy                                                        | Emphasize grid of improved arterial streets with sidewalks and bike lanes over freeway expansions to accommodate regional growth.                                                                                                                                          |                                                                                                                                                                                                                                                   |
|----------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| U.S. 50 El Dorado                                                    | <ul style="list-style-type: none"> <li>• Carpool lane extension, El Dorado Hills to Shingle Springs interchange</li> </ul>                                                                                                                                                 | <ul style="list-style-type: none"> <li>• New auxiliary lanes on U.S. 50 with connected parallel roads between El Dorado Hills and Shingle Springs</li> <li>• Four-lane Green Valley, Folsom to El Dorado Hills</li> </ul>                         |
| U.S. 50 Sacramento                                                   | <ul style="list-style-type: none"> <li>• New carpool lanes, Sunrise Boulevard to downtown Sacramento</li> <li>• New auxiliary lanes, various locations</li> </ul>                                                                                                          | <ul style="list-style-type: none"> <li>• Rebuilt interchanges at U.S. 50 and State Route 99, U.S. 50 and I-5</li> </ul>                                                                                                                           |
| I-80 Yolo                                                            | New carpool lanes, Davis to West Sacramento, with new bike bridge across the Yolo Causeway                                                                                                                                                                                 |                                                                                                                                                                                                                                                   |
| I-80 Sacramento                                                      | <ul style="list-style-type: none"> <li>• Carpool lane extension, Watt Avenue west to Yolo County</li> </ul>                                                                                                                                                                | <ul style="list-style-type: none"> <li>• Roseville Road widened to four lanes</li> </ul>                                                                                                                                                          |
| I-80 Placer                                                          | <ul style="list-style-type: none"> <li>• Carpool lane extension plus two new auxiliary lanes, Sacramento County line to State Route 65</li> </ul>                                                                                                                          | <ul style="list-style-type: none"> <li>• I-80/State Route 65 interchange partial rebuild</li> </ul>                                                                                                                                               |
| State Route 65                                                       | <ul style="list-style-type: none"> <li>• New two- and four-lane Lincoln Bypass expressway</li> <li>• New two-lane parkway north and east around Wheatland, connecting to State Route 65 on either end</li> </ul>                                                           | <ul style="list-style-type: none"> <li>• New carpool lanes, I-80 to Blue Oaks Boulevard</li> <li>• New four lane Yuba River Parkway east of Marysville, connecting to State Route 65 at Olivehurst Avenue</li> </ul>                              |
| Placer Parkway                                                       | New four lane connector with a northern alignment between State Route 65 at Whitney Ranch Parkway and State Route 70/99 at Sankey. Ultimate six-lane connector in Plus 10% list                                                                                            |                                                                                                                                                                                                                                                   |
| State Route 99/<br>State Route 70,<br>Sacramento, Sutter<br>and Yuba | <ul style="list-style-type: none"> <li>• New carpool lanes, I-5 to Elkhorn</li> </ul>                                                                                                                                                                                      | <ul style="list-style-type: none"> <li>• State Route 99 and State Route 70 both four-lane expressways, Placer Parkway to Yuba City/Marysville</li> </ul>                                                                                          |
| I-5 North,<br>Sacramento                                             | <ul style="list-style-type: none"> <li>• New carpool lanes, downtown Sacramento to State Route 70/99</li> </ul>                                                                                                                                                            | <ul style="list-style-type: none"> <li>• I-80/State Route 70/99 interchange rebuilt</li> </ul>                                                                                                                                                    |
| I-5 South,<br>Sacramento                                             | New carpool lanes, U.S. 50 to Elk Grove Boulevard                                                                                                                                                                                                                          |                                                                                                                                                                                                                                                   |
| State Route 99,<br>Sacramento                                        | New auxiliary lanes                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                   |
| Elk Grove-Rancho<br>Cordova-El Dorado<br>Corridor                    | <ul style="list-style-type: none"> <li>• Grid of four- and six-lane roads, running east-west from Keifer Boulevard to Elk Grove Boulevard, and north-south from Watt Avenue to Jaeger Road</li> <li>• Kammerer Road expanded to four and six lanes in Elk Grove</li> </ul> | <ul style="list-style-type: none"> <li>• Grant Line Road expanded to six lanes from State Route 99 to Bradshaw Road and four lanes between Bradshaw Road and White Rock Road with right-of-way preserved for possible future expansion</li> </ul> |



FIGURE  
2-1

## New Bus Service Diagram



### Bus Rapid Transit (BRT)/Enhanced Bus Corridors

- Limited-stop bus services with 15–20 minute frequencies and enhancements for quality service
- Running along major corridors connecting activity centers in Citrus Heights, downtown Sacramento, Elk Grove, Folsom, North Natomas, Rancho Cordova, Rocklin and Roseville

### Express Bus

- Increased peak-period commuter services that connect regional activity centers
- Running along freeways with few stops and utilizing carpool lanes where available

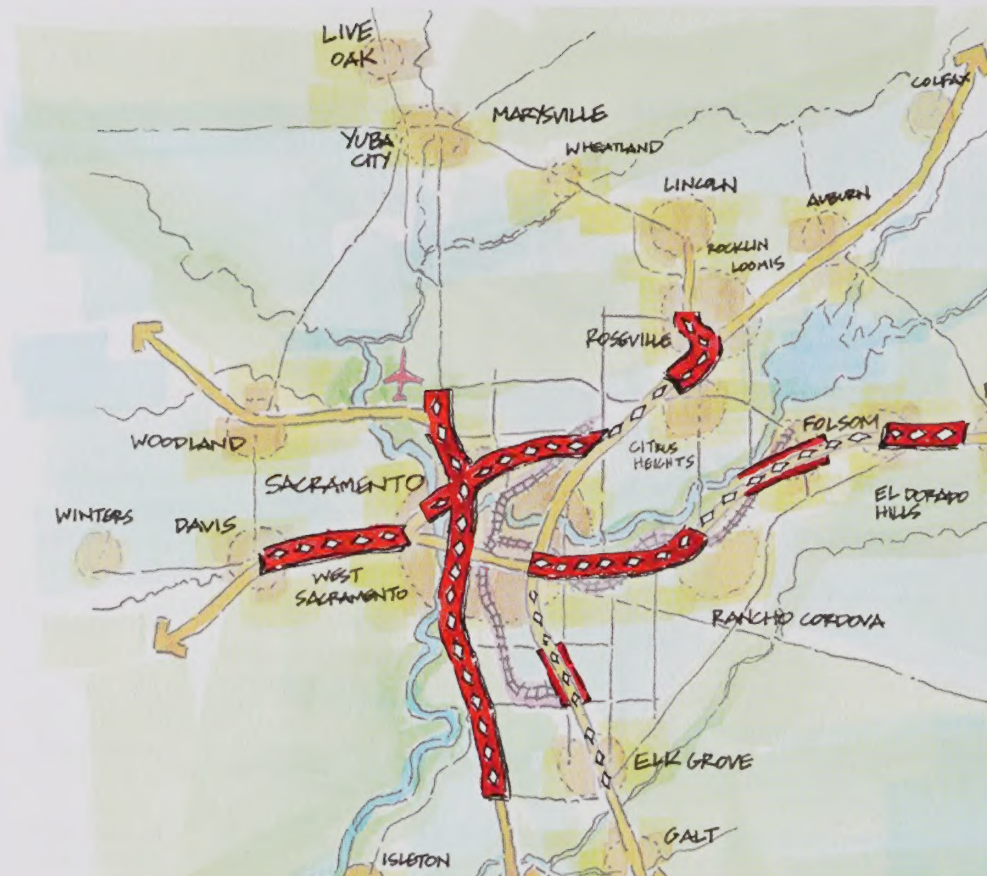
### Local Buses

- Large increase in local fixed-route services throughout region
- Large increase in ADA paratransit services
- Connections to neighborhood shuttles and services for longer distance bus and rail options



FIGURE  
2-2

New Freeways Diagram



### *New Auxiliary Lanes*

- State Route 99—sections between Florin Road to Calvine Road
- U.S. 50—sections between Howe Avenue to Mather, Sunrise Boulevard to Hazel Avenue, Folsom to El Dorado Hills
- I-80—Placer/Sacramento County line east to State Route 65

### *New Carpool (HOV) Lanes*

- State Route 65 Placer County—I-80 north to Blue Oaks Boulevard
- State Route 70/99 Sutter—I-5 north to Elkhorn Boulevard
- I-5 Northern Sacramento—Richards Boulevard north to 70/99
- I-5 Southern Sacramento—U.S. 50 south to Elk Grove Boulevard
- I-80 Placer—Placer/Sacramento County line east to State Route 65
- I-80 Sacramento—Yolo County to Longview Drive/Watt Avenue
- I-80 Yolo—Enterprise Boulevard in West Sacramento west to Mace Boulevard in Davis
- U.S. 50 El Dorado—El Dorado Hills east to Shingle Springs Rancheria interchange
- U.S. 50 Sacramento—Sunrise Avenue west to downtown Sacramento



FIGURE  
2-3

## New Rail Service Diagram

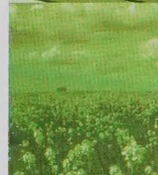


### New Rail Extensions

- Downtown Sacramento to Natomas to Sacramento International Airport
- Downtown Sacramento to West Sacramento
- Rancho Cordova Town Center
- South Line (Blue Line) extension from Meadowview to Cosumnes River College

### Existing Rail Improvements

- Blue Line and Gold Line track improvements to increase peak-period service frequency
- Operational improvements in downtown Sacramento to accommodate increased frequencies







## BICYCLE AND PEDESTRIAN INVESTMENTS

**This plan increases the investment in bicycle and pedestrian facilities by 56 percent.** In addition to the \$1.4 billion (\$2.4 billion in escalated costs) in direct investments for bicycle and pedestrian facilities, many road investments in the project list include bicycle and pedestrian components. In total, 25 percent of the local road investments contain amenities for bicycles and pedestrians. SACOG's Bicycle, Pedestrian and Trails Master Plan provides the direction for specific investments. Policies and investments in the project lists include:

- **Projects that implement "complete streets" concepts**, where the right-of-way is designed for all modes of travel, including pedestrians, bicyclists, and transit, as well as automobiles.

- **Sidewalk network extensions** in urban neighborhoods with segments widened where needed.

- **Complementary pedestrian bridges and pedestrian intersection improvements** that include ADA-compatible ramps, bulb-outs and special crossing signals.

- **Bike lanes** on more neighborhood and major streets.
- **Multi-use bike/pedestrian trails** (off-street, grade-separated) that offer residents the opportunity to make utilitarian and leisure trips separated from vehicular traffic.
- **Bike facilities** (racks, lockers, bathrooms) at major transit stops/hubs (e.g., light rail, bus rapid transit) and at key activity centers (e.g., downtown Sacramento, shopping malls, large office complexes).

## REGIONAL BICYCLE, PEDESTRIAN, AND TRAILS MASTER PLAN PROJECTS

**The Regional Bicycle, Pedestrian, and Trails Master Plan lays out the framework for a regional pedestrian and bikeway network.** The Master Plan provides a snapshot of what is needed to build a connected system of routes and facilities to support safe and convenient bicycle and pedestrian access throughout the region. The plan was adopted by the SACOG Board in September 2003 and last amended in July 2007. Copies of the plan are available at [www.sacog.org](http://www.sacog.org).

The development of the regional network is oriented toward utilitarian trips and emphasizes regional connectivity and connections to transit systems. Local routes may serve other purposes, and identifying the regional network does not imply that local sidewalks or bikeways are somehow demoted or will not be funded. The regional system may have greater significance or emphasis for decisions being made at the regional level with respect to pedestrian and bicycle transportation.

The recommended regional projects were selected based on costs, benefits, and how well they meet the program-specific goals outlined below. A complete list of regional projects is included in **Appendix C2** of the MTP or available in **Appendix B** of the Regional Bicycle, Pedestrian and Trails Master Plan. The projects identified do not represent the entire network—only those segments that have yet to be built and require funding. SACOG will amend the list in the Master Plan as projects are completed and priorities change.



## SPECIFIC GOALS FOR CAPITAL PROJECTS

### ■ Provide bicycle/pedestrian connections

- Between, through, and within all cities and towns of the six-county region
- To regional and local public transit systems (including rail) at stops, stations, and terminals
- To carpool/vanpool park-and-ride lots
- To regional and local activity centers such as schools, libraries, community centers, colleges, universities, hospitals, medical offices, senior residences, parks, athletic facilities, government services, employment centers, high-density residential areas, and commercial centers

■ **Provide bicycle and pedestrian access** within or through the central business districts of the region

■ **Fill gaps** in existing, planned, or proposed interregional bicycle or pedestrian routes

■ **Provide bicycle and pedestrian access** across barriers such as arterial roads, highways, freeways, rivers, canals, creeks, and railroads

■ **Improve the time convenience of walking and bicycling**, for example, with shortcuts or special facilities such as bicycle/pedestrian boulevards



■ **Improve the safety and security** of walking and bicycling where needed for utilitarian purposes

■ **Provide an aesthetic**, pleasant, or more comfortable bicycling or walking experience

■ **Provide capital facilities** that support bicycling, such as storage, parking, or bike stations

■ **Complement projects funded with other regional or state sources** such as the Community Design or Safe Routes to School programs, thereby improving bicycle and pedestrian access provided by those programs

■ **Complement bicycle and pedestrian plans** and projects in an adjacent region

## SPECIFIC GOALS FOR NON-CAPITAL PROJECTS AND PROGRAMS

■ **Encourage bicycling and walking** through public information, education, and awareness

■ **Where needed, perform studies and plans** that support the goals for capital facilities stated above

■ **Increase the level of public agency staff expertise** on bicycling and walking

## BICYCLE AND PEDESTRIAN SPECIFIC PROJECTS IN THE MTP 2035

The MTP Project List (Appendix A2) includes 103 identified bicycle and pedes-





trian projects that total nearly \$671 million (\$986 million in escalated costs). The remaining balance of the \$1.4 billion (\$2.4 billion in escalated costs) specified for bicycle and pedestrian projects is available for future implementation of the Regional Bicycle, Pedestrian and Trails Master Plan as well as other local agency bicycle, pedestrian, and ADA-specific improvements.

## PROGRAMS AND PLANNING

The plan supports \$2.3 billion (\$4.0 billion in escalated costs) in funding for supplementary programs and planning efforts, an increase of 35 percent from the MTP2025 levels. Investments include the following:

- **Community Design:** Seed funding to encourage smart-growth development projects complementary to this MTP2035 that may otherwise not happen. The program has been expanded to allow greater regional coverage and support for projects from the planning phase through implementation.



- **Air Quality Improvement Programs:** Funding includes extension of the SECAT program for replacing or retrofitting diesel engines and trucks, and Spare the Air programs to reduce vehicle-miles-traveled on bad air days.

- **Intelligent Transportation System:** Funding reserved for implementation of the regional ITS Strategic Deployment Plan, which includes automated message signs, crosswalk signals with pedestrian countdown timers, real-time transit message signs, and transit signal priority for buses. These investments also include Smart Corridors, including Sunrise and Hazel avenues in Sacramento, where near-term ITS strategies are planned by local agencies, and expansion of traffic operations centers.

- **Travel Demand Management:** Goals for this funding program include 100 percent of employers served by a transportation management organization, a larger ride-share database so that searches average more ridematches, financial incentives for taking alternative modes or telecommuting to work, personalized alternative trip-planning available to the public, expanded promotional campaigns including May is Bike Month and the Vanpool Incentive Program, and demonstration projects (such as carsharing, instant ridematching, and TDM plans for large development and construction projects).

- **511 Traveler Information:** This existing phone and web-based service will continue to develop as a more highly developed and user-friendly source of detailed travel information. Goals for the future include real-time, web-based traffic information, voice interactivity, and a public transit trip planner. The web version will include useful maps for alternative modes (e.g., transit system networks, bike routes). A related project is improved highway advisory radio (road closures, weather, construction) for key highways.

- **Community Enhancements:** Funding for investments, including soundwalls, traffic calming, and streetscaping features that can make a corridor or intersection more attractive while also improving its safety and operation.



- **Studies:** Funding to implement the MTP through detailed studies on a wide range of subjects including rail transit opportunities, a regional open space strategy, complete streets design guidelines, and a rural-urban connections strategy.

## PUBLIC TRANSIT INVESTMENTS

This plan provides \$14.3 billion (\$24.6 billion in escalated costs) in transit capital and operating investment, a 21 percent higher investment in transit than the MTP2025 contained. This increase allows more widespread and frequent bus service on arterial streets along with new services and strategic rail investments. The resulting 2035 transit network is depicted in **Figure 2-4**. In all, the plan increases the total bus and rail transit service hours across the region by more than 150 percent compared to 2005. The investments include:

- **Increased transit options in local areas to better match transit type to the density of development and related demand for service.** Options range from increasing the amount of service on existing fixed-route and express bus lines, to introducing new services including bus rapid transit and neighborhood shuttles.

- **More frequent transit service with greater regional coverage,** with 15-minute or better service on many corridors. The plan calls for 21 percent of all transit services (bus and rail) to operate 15-minute or better service by 2035, versus 6 percent of services today.

- **Expansion of ADA paratransit services** to keep up with the fast-growing senior population. The plan calls for paratransit vans to be replaced regularly and equipped with technologies that optimize trip planning, as well as use of quality vehicles.

- **More replacement buses,** running on alternative fuels

- **Strategic expansion of rail** where it can be cost effective with appropriate housing and employment densities, and introduction of streetcars in Rancho Cordova and

between downtown Sacramento and West Sacramento

- **Operational improvements to improve rail service frequencies**

- **Renovation and reconfiguration of the Sacramento Amtrak station** (also called the Sacramento Valley Station) as a central intermodal facility for bus and rail connections. Project elements include moving and renovation of the old Southern Pacific depot and building new sidewalks, a parking garage and improved freeway ramps.

- **Additional service on the existing Capitol Corridor** interregional rail line, provided by Caltrans/Amtrak through a Joint Powers Authority

- **Additional service on the existing San Joaquin intercity rail line,** operated by Amtrak and funded by Caltrans

- **Increased transit security,** such as patrols and lighting, as well as trash collection to enhance the attractiveness of transit travel

## RIVER CROSSING INVESTMENTS

The plan includes over \$500 million (over \$700 million in escalated costs) in investments for the development of more road and transit capacity across the American, Sacramento, and Feather rivers, with local cross-river transit routes and a minimum number of new bridges.

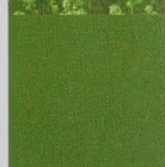
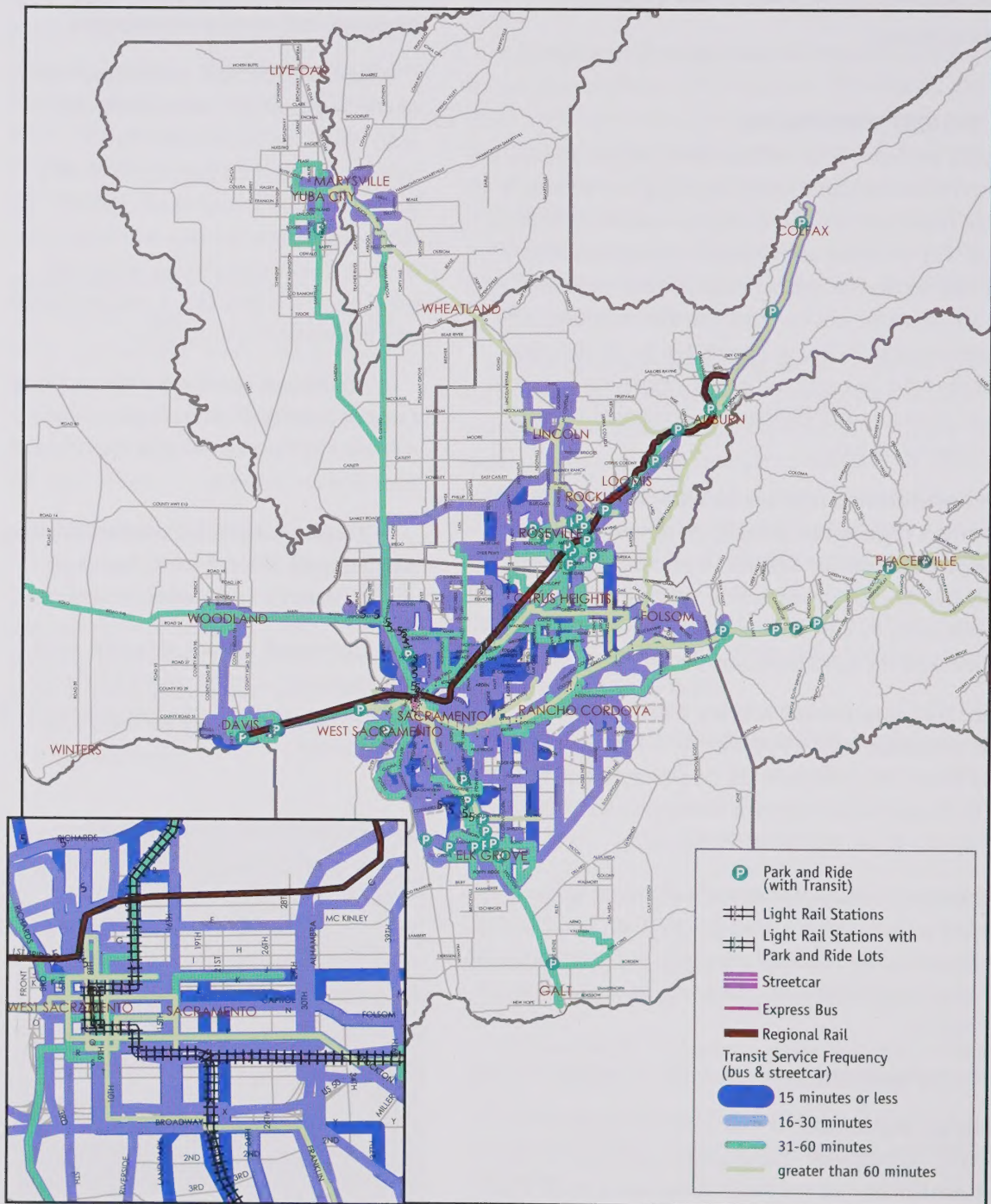


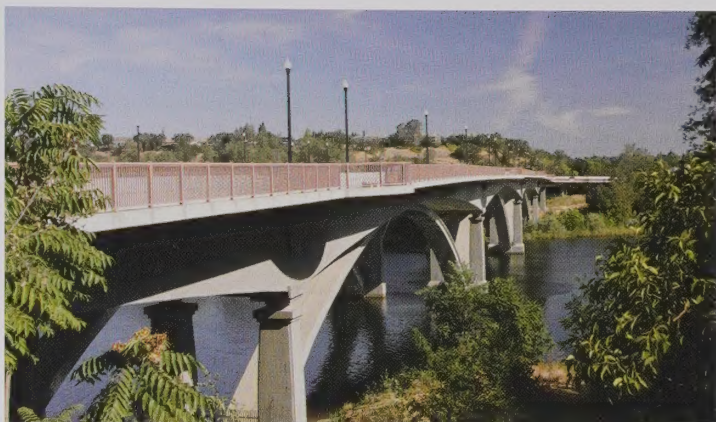


FIGURE  
2-4

MTP2035 Transit Network







- **Improved river access across the American and Sacramento rivers into downtown Sacramento**—New river crossings across the lower American River from Sacramento to South Natomas, and across the Sacramento River from West Sacramento to Sacramento to provide access into downtown Sacramento where there will be a large increase in jobs and residents by 2035

- **Feather River crossings at Yuba City and Marysville**—two six-lane bridges, at 5th Street and 10th Street, with redesigned approaches and distribution on both ends, to link Yuba City and Marysville effectively and avoid the high cost of a third bridge

- **Widening of existing bridges** at Howe and Hazel avenues to six lanes, and a new bridge to replace Folsom Dam Road, which was closed in 2003

## ROAD MAINTENANCE, REHABILITATION, SAFETY, AND AESTHETICS INVESTMENTS

This plan includes an investment of \$12.4 billion (\$21.3 billion in escalated costs), providing an increase of 17 percent from MTP2025 levels for the following key investment areas:

### Road Maintenance

- **Preventive maintenance projects** that include repaving on a shorter cycle to lengthen the life cycle of highways and local roads;

- **More regular repair, rehabilitation, and reconstruction** of roadways, including faster-response pothole repair; and

- **Improved landscaping** and regular litter clean-up on highway corridors.

### Highway and Freeway Safety

- **Guardrails and improved shoulders** along critical sections of freeways and highways;

- **Special paving** (e.g., diamond grooving, reflectors, skid-reducing material) and lighting along specific road segments;

- **Operation and maintenance** of emergency call boxes on highways and freeways;

- **Changeable message signs** for traffic alerts; and

- **Increased freeway service patrols** for quick incidence response.

### Street Safety and Aesthetics

- **Safer rail grade crossings** and urban interchanges;

- **Street safety measures**, such as left-turn lanes at intersections, improved lighting and signage, special paving, and median strips, particularly where there are high numbers of automobile or pedestrian accidents;

- **Traffic calming** on neighborhood streets or other streets where traffic is too fast, by utilizing street narrowing, alignment changes, barriers, speed bumps,







roundabouts, sidewalk bulbouts, refuge islands at intersections, pavement treatments, angled parking; and

- **Streetscaping, such as landscaped buffers** between streets and sidewalks, landscaped median islands, lighting, signage, and street furniture.

## LOCAL ROAD INVESTMENTS

**The plan invests \$8.2 billion (\$14.1 billion in escalated costs) in local roads to accommodate projected growth.** The investment emphasis is on grids of new and improved arterial streets with pedestrian features rather than extensive freeway expansions. The resulting 2035 road network is depicted in Figure 2-5.

### *Local Road Projects include:*

- **Elk Grove-Rancho Cordova-El Dorado Connector.** The Connector segments are Kammerer, Grant Line and White Rock Roads. Grant Line Road will serve as the main body of the connector, at six lanes on the south end, four lanes

from Bradshaw Road to near White Rock Road, and then six lanes going east on White Rock Road to El Dorado County. The MTP2035 designation of a portion of Grant Line Road at four lanes with additional right-of-way for a potential six lanes is based on MTP2035 land use allocations adopted by the Board and on SACOG technical analysis that demonstrates adequate capacity. Ongoing collaborations between SACOG, the Connector Joint Powers Authority (JPA) and the U.S. 50 Mobility Partnership will advance initial Connector implementation efforts and review later phases of the project that will inform the 2012 MTP update.

### **A complete grid of roads in southeastern Sacramento County that provide automobile, transit and bicycle/pedestrian features to support travel for the projected population increase of more than 300,000 by 2035.**

Primarily, these roads are four lanes, but six-lane roads are planned for on Calvine Road, South Watt Avenue, Old Placerville Road, South Sunrise Boulevard, and a six-lane expressway on White Rock Road/International Drive, based on building enough, but not more, capacity than needed to serve commuting from all over the area into the job center in Rancho Cordova as well as the relatively small percentage of through trips.

- **Paired arterials,** with one designed to carry traffic to the freeway and the other to serve community business districts with good transit along it. Examples include Madison Avenue and Greenback Lane, Calvine and Florin roads, Hazel and Sunrise avenues.

- **Projects that serve the movement of goods**

The Sacramento region should consider a variety of projects—both capital projects and “meta” projects—that help goods movement. While there are very few projects that are designed solely for the benefit of goods movement, some projects would provide particular benefit. A number of projects that are only designed for passenger trips nevertheless have the effect of freeing up capacity on other facilities that would benefit goods movement.



## STATE ROUTE INVESTMENTS

\$2.4 billion (\$4.1 billion in escalated costs) in capital projects that will be carried out by Caltrans District 3, which has jurisdiction over state highway maintenance and construction within the SACOG region. These include new or expanded carpool and auxiliary lanes, new or reconstructed interchanges, and two new expressways.

■ **The vast majority (89 percent) of new roadway lane miles in MTP2035 are on surface streets, not freeways.** Added freeway lane miles account for only 11 percent of the total in new roadway capacity. Of the added freeway lane miles, 75 percent of these lanes are carpool, auxiliary lanes, new ramps or widened ramps. Only 25 percent are added mainline, mixed-flow lanes.

■ **The MTP adds carpool lanes and auxiliary lanes in many interior areas of the freeway system, particularly serving suburban job centers, where it will take time to build up employment densities to the point that transit becomes a serious option for commuting.** The MTP2035 includes carpool lanes only as far east as Enterprise on I-80/U.S. 50 in Yolo County, as far north as State Route 70/99 on I-5, as far north as Elkhorn Boulevard on State Route 70/99, as far north as Blue Oaks Boulevard on State Route 65, and as far east as Shingle Springs Rancheria on U.S. 50, with some auxiliary lanes beyond those limits, based on funding availability and cost-effective performance. Increased frequency of express bus services along these corridors is included to maximize the capacity of the carpool lanes and to give transit a travel-time advantage.



■ **The plan also focuses on accommodating trucks** on the highway system, to the greatest extent possible. Reducing overall congestion is important to trucks, as they represent the equivalent of two to four automobiles in stop-and-go traffic. Goods movement is most benefited by the MTP's strategic investments in new freeway lanes, new roadways connecting activity centers and geometrically improved interchanges, since most trucking prefers to use freeways whenever reasonable. Appendix C3 identifies the most significant road capacity investments to support goods movement in the plan.

■ **Improvements for congested interchanges**, including Watt Avenue and U.S. 50, Elkhorn Boulevard and State Route 99, and Grant Line Road and State Route 99

■ **Unspecified Operations Funding**—with the recognition that there are challenges for circulation of autos, transit, trucks, and pedestrians in the immediate downtown area of Sacramento, using the Capital City Freeway near Cal Expo, and for traffic on Highways 70 and 20 through Marysville, the Plan reserves funds (\$100 million \$170.8 million in escalated costs) for Sacramento, \$50 million [\$117.0 million in escalated costs] for the Capital City Freeway, and \$80 million [\$187.2 million in escalated costs] for the Marysville area) to implement operational strategies to be defined in future more-detailed studies.

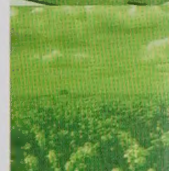
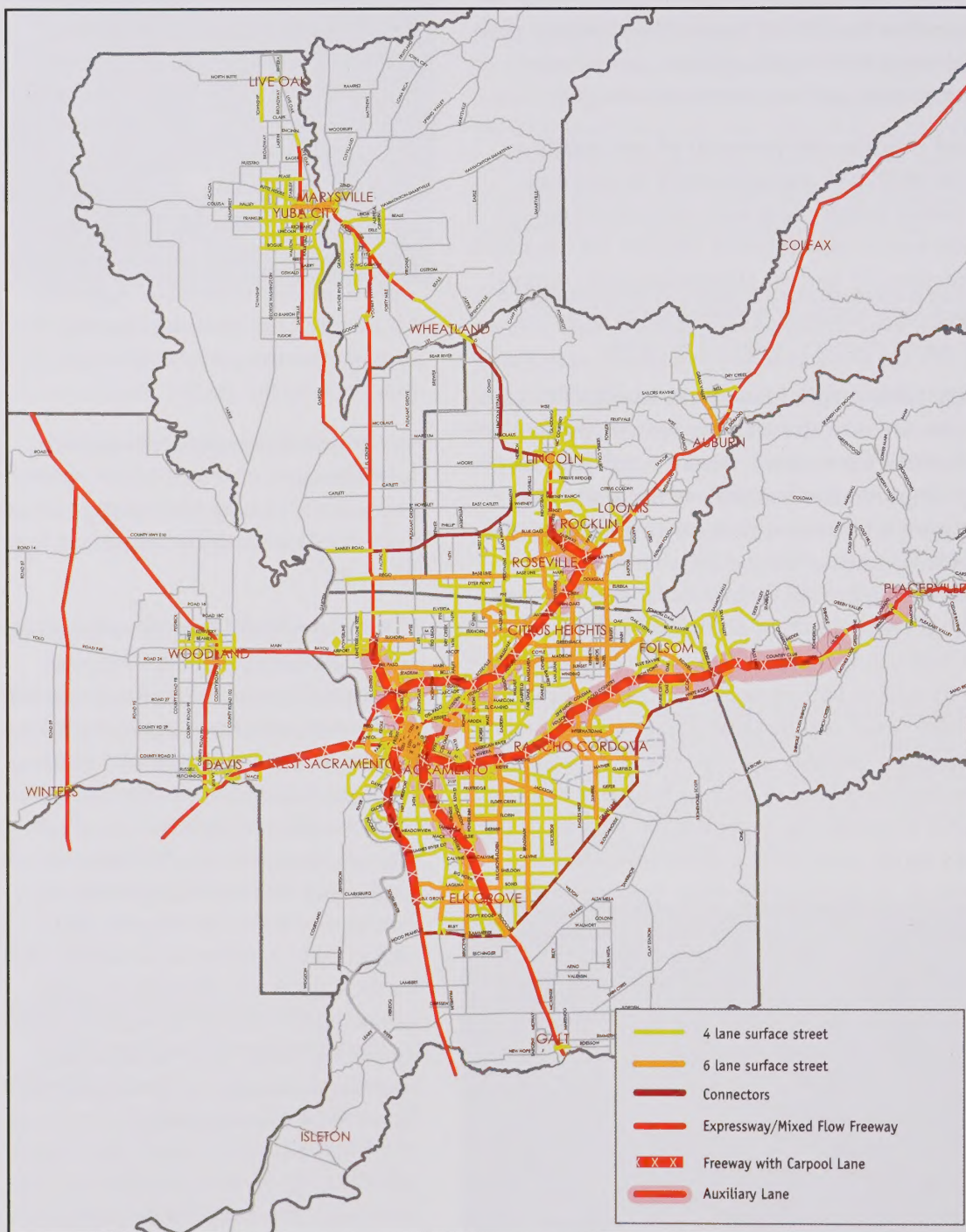




FIGURE  
2-5

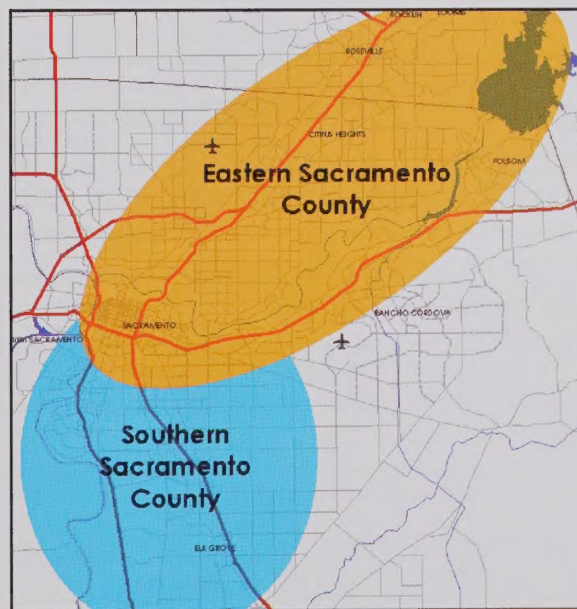
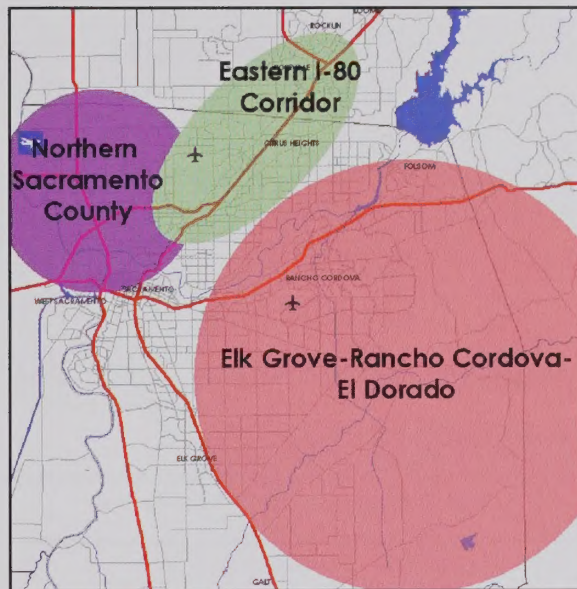
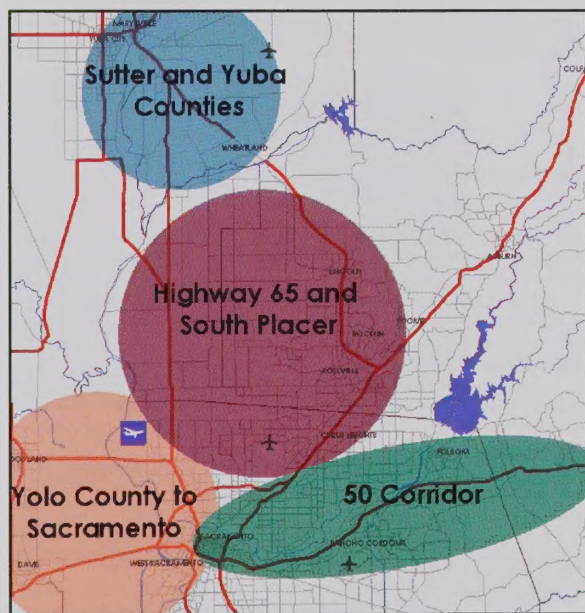
MTP2035 Road Network





## CORRIDOR LEVEL SUMMARY OF MTP2035 INVESTMENTS

Corridor diagrams and descriptions of highlighted MTP2035 projects (Figures 2-6 through 2-14) are presented in a counterclockwise order from south to east to north to west. Projects included in the corridor tables typically share at least one of the following criteria: significant impact, high cost or a large project carried over from the last MTP. The diagrams below generally illustrate the areas included in the analysis. Appendices A1 and A2 provide the comprehensive project lists for all capital projects in the MTP2035.





**FIGURE**  
**2-6**

## Southern Sacramento Corridor



### HIGHLIGHTED CORRIDOR PROJECTS

#### New Bus Services

Bus Rapid Transit (BRT)/Enhanced Bus from South Sacramento to Rancho Cordova via Florin Road, Bradshaw Road, and Old Placerville Road

| Estimated Capital Cost (in millions) | \$ Constrained | \$\$ Plus 10% |
|--------------------------------------|----------------|---------------|
| included in transit total            | X              |               |
| included in transit total            | X              |               |
| included in transit total            | X              |               |
| included in transit total            | X              | X             |

BRT/Enhanced Bus from downtown Sacramento to Cosumnes River College (CRC) via Stockton Boulevard and Bruceville Road

BRT/Enhanced Bus from Cosumnes River College (CRC) to Elk Grove via Bruceville Road and Elk Grove Boulevard

Additional new transit includes increased ADA paratransit, neighborhood shuttles, increased local bus services throughout South Sacramento and Elk Grove, and expanded freeway express bus services on I-5 and State Route 99

#### New Rail Service:

South Line light rail extension to Cosumnes River College

Commuter rail between San Joaquin County and downtown Sacramento

|               |                                     |  |
|---------------|-------------------------------------|--|
| \$232         | X                                   |  |
| Not Estimated | X (commuter rail feasibility study) |  |

#### New East-West Road Connections:

Cosumnes River Boulevard Connector between Franklin Boulevard and I-5, along with a new Cosumnes River Boulevard/I-5 interchange

Kammerer Road/Hood Boulevard Franklin Boulevard expanded to four/six lanes between State Route 99 and I-5

Sheldon Road expanded to four lanes between Bruceville Road and Bradshaw Road with a new State Route 99 interchange

|      |   |  |
|------|---|--|
| \$94 | X |  |
| \$58 | X |  |
| \$93 | X |  |

#### New Freeway Auxiliary Lanes

State Route 99 between Florin Road and Calvine Road

|     |   |  |
|-----|---|--|
| \$9 | X |  |
|-----|---|--|

#### New Freeway Carpool Lanes

I-5 between U.S. 50 and Elk Grove Boulevard

|       |   |  |
|-------|---|--|
| \$200 | X |  |
|-------|---|--|



**FIGURE**  
**2-7**

## Elk Grove/Rancho Cordova/El Dorado Corridor



### HIGHLIGHTED CORRIDOR PROJECTS

#### New Longer Distance Bus and Rail

|                                                                                                                                                                                                                                                                         | Estimated Capital Cost (in millions) | \$ Constrained | \$\$ Plus 10% |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|----------------|---------------|
| BRT/Enhanced Bus connecting South Sacramento to Rancho Cordova via Florin Road, Bradshaw Road, Old Placerville Road                                                                                                                                                     | included in transit total            | X              |               |
| BRT/Enhanced Bus connecting Elk Grove to Arden/Arcade and South Placer County via Elk Grove Boulevard, Elk Grove-Florin Road and Watt Avenue                                                                                                                            | included in transit total            | X              |               |
| New Bus Connections between Elk Grove and Rancho Cordova via Bradshaw Road, Grant Line Road and Sunrise Boulevard                                                                                                                                                       | included in transit total            | X              |               |
| New Bus Connections between El Dorado County and Rancho Cordova via White Rock Road, Iron Point Road, and Folsom Boulevard                                                                                                                                              | included in transit total            | X              |               |
| Additional new transit includes increased ADA/paratransit, neighborhood shuttles in Rancho Cordova and Folsom; increased local bus services throughout Rancho Cordova, Elk Grove, and southeast Sacramento County, and expanded freeway express bus services on U.S. 50 | included in transit total            | X              | X             |

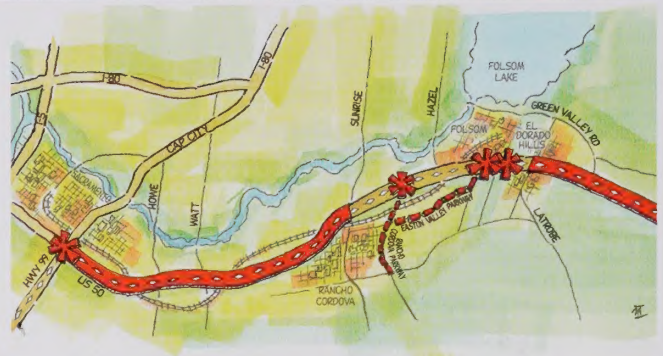
#### New/Expanded Roads

|                                                                                                                                                                                                                                     |                                 |   |  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------|---|--|
| Grid of four and six-lane multi-modal roads, running east-west from Keifer Boulevard to Elk Grove Boulevard, and north-south from Watt Avenue to Jaeger Road to serve the large growth projected for southeastern Sacramento County | Identified in full Project List | X |  |
| Grant Line Road expanded to six lanes between State State Route 99 and Bradshaw Road                                                                                                                                                | \$49                            | X |  |
| Grant Line Road expanded to four lanes between Bradshaw Road and White Rock Road with right-of-way preserved for possible future expansions later and funds for context-sensitive design through Sheldon Road                       | \$152                           | X |  |
| White Rock Road widened to six lanes and operational improvements from Rancho Cordova Parkway to El Dorado Hills                                                                                                                    | \$272                           | X |  |
| Old Placerville Road improvements combined with a new six-lane International Drive parallel to U.S. 50                                                                                                                              | \$156                           | X |  |
| New Hazel Avenue extension from U.S. 50 to White Rock Road                                                                                                                                                                          | \$33                            | X |  |



**FIGURE**  
**2-8**

## U.S. 50 Corridor



### HIGHLIGHTED CORRIDOR PROJECTS

|                                                                                                                                                                              | Estimated Capital Cost (in millions) | \$ Constrained | \$ Plus 10% |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|----------------|-------------|
| <b>Longer Distance Bus</b>                                                                                                                                                   |                                      |                |             |
| Express Buses running in the U.S. 50 carpool lanes with higher frequencies                                                                                                   | included in transit total            | X              | X           |
| BRT/Enhanced Bus through the Sacramento State campus, connecting to the 65th Street light rail station                                                                       | included in transit total            | X              |             |
| Additional new transit includes increased ADA/paratransit, neighborhood shuttles and increased local bus services                                                            | included in transit total            | X              | X           |
| <b>New Rail Service</b>                                                                                                                                                      |                                      |                |             |
| Streetcar starter line: Rancho Cordova Town Center                                                                                                                           | \$88                                 | X              |             |
| Gold Line light rail line track improvements between Sunrise Boulevard and downtown Folsom (to support 15-minute peak-period frequency to Folsom)                            | \$80                                 | X              |             |
| New Gold Line light rail stations at Horn Road and Mineshaft Station                                                                                                         | \$8                                  | X              |             |
| Grade-separated road/light rail track intersections on Gold Line at Bradshaw Road, Mather, Routier Road, and Zinfandel Drive                                                 | \$100                                | X              |             |
| <b>New/Expanded Roads</b>                                                                                                                                                    |                                      |                |             |
| Green Valley Road as four-lane connector between Folsom and El Dorado Hills                                                                                                  | \$41                                 | X              |             |
| New east-west Easton Valley Parkway parallel to U.S. 50 between new Rancho Cordova Parkway and Hazel Avenue extension (six lanes), east to Prairie City Road with four lanes | \$90                                 | X              |             |
| New north-south Rancho Cordova Parkway with a U.S. 50 interchange                                                                                                            | \$104                                | X              |             |
| New Interchange: U.S. 50 and Empire Ranch Road                                                                                                                               | \$25                                 | X              |             |
| New Interchange: U.S. 50 and Oak Avenue                                                                                                                                      | \$30                                 | X              |             |
| <b>Freeway Improvements</b>                                                                                                                                                  |                                      |                |             |
| New Auxiliary Lanes in locations between the El Dorado County line and Sunrise Boulevard                                                                                     | \$65                                 | X              |             |
| New Carpool Lanes: Sunrise Boulevard west to Watt Avenue                                                                                                                     | \$165                                | X              |             |
| New Carpool Lanes: Watt Avenue to downtown Sacramento                                                                                                                        | \$75                                 | X              |             |
| New Carpool Lanes: El Dorado Hills to Shingle Springs interchange                                                                                                            | \$115                                | X              |             |
| Interchange Rebuild: U.S. 50 and I-5                                                                                                                                         | \$200                                | X              |             |
| Interchange Rebuild: U.S. 50 and State Route 99                                                                                                                              | \$150                                | X              |             |



**FIGURE**  
**2-9**

## Eastern Sacramento Corridor



### HIGHLIGHTED CORRIDOR PROJECTS

#### Longer Distance Bus

|                                                                                                                                                                                                                                       | Estimated Capital Cost (in millions) | \$ | \$\$ Plus 10% |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|----|---------------|
| BRT/Enhanced Bus connecting Rancho Cordova to South Placer County and Elk Grove via Watt Avenue and Elk Grove-Florin Road with a busway between Fair Oaks Boulevard and Folsom Boulevard to save time through the U.S. 50 interchange | included in transit total            | X  |               |
| BRT/Enhanced Bus connecting Rancho Cordova to South Placer County via Sunrise Boulevard with a busway between the Sunrise/U.S. 50 light rail station and Fair Oaks Boulevard to save time through the U.S. 50 interchange             | included in transit total            | X  |               |
| BRT/Enhanced Bus connecting Rancho Cordova to South Placer via Taylor Road, Sierra College Boulevard and Hazel Avenue                                                                                                                 | included in transit total            | X  |               |
| BRT/Enhanced Bus connecting Citrus Heights, Orangevale and Folsom via Greenback                                                                                                                                                       | included in transit total            | X  |               |
| Additional new transit includes increased ADA paratransit, neighborhood shuttles; increased local bus services throughout the area (Arden-Arcade, Carmichael, Citrus Heights, etc.)                                                   | included in transit total            | X  | X             |

#### New Bridges/Tunnels

|                                                                             |                                         |   |   |
|-----------------------------------------------------------------------------|-----------------------------------------|---|---|
| Hazel Avenue Bridge across the American River is widened to six lanes       | included in expanded road project below |   |   |
| American River Bridge below Folsom Dam replacement as a four-lane crossing  | \$121                                   | X |   |
| New Oak Avenue Bridge in Folsom (American River south of Folsom Dam Bridge) | \$115                                   |   | X |
| Howe Avenue Bridge across American River is widened to six lanes            | \$50                                    | X |   |

#### New/Expanded Roads

|                                                                                                                                                                                                                                             |       |   |  |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|---|--|
| Sunrise Boulevard at U.S. 50: Sunrise is improved from Trade Center Drive to Coloma Road with associated intersection improvements and busway for faster transit travel                                                                     | \$62  | X |  |
| Watt Avenue at U.S. 50: Watt interchange redesigned with contraflow busway for faster transit travel                                                                                                                                        | \$50  | X |  |
| Sunrise Boulevard connection between Rancho Cordova and South Placer County. Sunrise is widened in section to become a six-lane road connecting Rancho Cordova and Roseville Boulevard                                                      | \$84  | X |  |
| Hazel Avenue connection between Rancho Cordova and South Placer County: Hazel is expanded to six lanes from American River Bridge north to the Placer County line where it connects to an expanded Sierra College Boulevard through Rocklin | \$223 | X |  |
| Madison Avenue connection between Citrus Heights and Folsom through expansion to six lanes between Fair Oaks Boulevard and Greenback Lane                                                                                                   | \$40  | X |  |
| Greenback Lane connection between Citrus Heights and Folsom through expansion to six lanes east of Manzanita Avenue to Main Avenue                                                                                                          | \$48  | X |  |



**FIGURE**  
**2-10**

## Eastern I-80 Corridor



### HIGHLIGHTED CORRIDOR PROJECTS

#### Longer Distance Bus

|                                                                                                                                                                     | Estimated Capital Cost (in millions) | \$ | \$\$ Plus 10% |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|----|---------------|
| BRT/Enhanced Bus connecting Roseville/Rocklin to Sacramento via North Watt Avenue and Pleasant Grove Boulevard/Blue Oaks Boulevard                                  | included in transit total            | X  |               |
| BRT/Enhanced Bus connecting Roseville/Rocklin to Rancho Cordova via Sunrise Boulevard and Sierra College Boulevard/Hazel Avenue                                     | included in transit total            | X  |               |
| BRT/Enhanced Bus connecting Roseville/Rocklin to Citrus Heights and Sacramento via Sunrise Boulevard and Auburn Boulevard to Watt Avenue/I-80 LRT                   | included in transit total            | X  |               |
| Additional Express buses running in the I-80 carpool lanes with higher frequencies                                                                                  | included in transit total            | X  | X             |
| Additional new transit includes increased ADA paratransit, neighborhood shuttles, increased local bus services throughout the area and freeway express bus services | included in transit total            | X  | X             |

#### New Rail Service

|                                                                                                                                                    |       |   |   |
|----------------------------------------------------------------------------------------------------------------------------------------------------|-------|---|---|
| Expanded Capitol Corridor service (two more daily trains each direction) between downtown Sacramento and Auburn, with a stop in downtown Roseville | \$50  | X |   |
| New commuter rail service between Placer, Sacramento, and Yolo counties (30-minute frequency in peak period)                                       | \$650 |   | X |

#### New/Expanded Roads

|                                                                                                                                                                                                                                                                                    |      |   |  |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|---|--|
| I-80 parallel capacity: four-lane Roseville Road from Marconi Avenue to Cirby Way connecting to an expanded Foothills Boulevard in Roseville                                                                                                                                       | \$54 | X |  |
| South Placer County to Rancho Cordova connection: Sierra College widened to six lanes from Sacramento County line to I-80, connecting to a widened Hazel Avenue extending to the Rancho Cordova area                                                                               | \$80 | X |  |
| South Placer County to Folsom/El Dorado Hills connection: Auburn-Folsom Road widened to four lanes from Sacramento County line to Joe Rodgers (Douglas Boulevard) to provide improved connection to Folsom and El Dorado Hills via the new Dam Road and expanded Green Valley Road | \$27 | X |  |

#### New Freeway Carpool and Auxiliary Lanes:

|                                                                                                                                         |       |   |   |
|-----------------------------------------------------------------------------------------------------------------------------------------|-------|---|---|
| New I-80 Sacramento County carpool lanes: one lane each direction, west from Longview Drive to I-5 interchange and west to Yolo County  | \$200 | X |   |
| New I-80 Placer County auxiliary and carpool lanes: improvements between Sacramento County line to I-80/State Route 65 interchange      | \$123 | X |   |
| Rebuild of I-80/State Route 65 interchange: phase one improvements to improve movement from eastbound I-80 to northbound State Route 65 | \$30  | X |   |
| Rebuild of I-80/State Route 65 interchange: phase two improvements to include direct HOV connectors                                     | \$80  |   | X |



**FIGURE  
2-11**

## State Route 65 and South Placer County Corridor



### HIGHLIGHTED CORRIDOR PROJECTS

#### Longer Distance Bus:

|                                                                                                                                                                 | Estimated Capital Cost (\$m) | \$ Constrained | \$\$ Plus 10% |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|----------------|---------------|
| BRT/Enhanced Bus between Rocklin/Roseville to Sacramento via North Watt Avenue, Blue Oaks Boulevard, Pleasant Grove Road and Galleria Boulevard                 | included in transit total    | X              |               |
| Additional Express Buses connecting Lincoln, Rocklin/Roseville to Sacramento via the I-80 and State Route 65 carpool lanes with increased frequencies           | included in transit total    | X              |               |
| Additional new transit includes increased ADA/paratransit, neighborhood shuttles, increased local bus services throughout the area freeway express bus services | included in transit total    | X              | X             |

#### New Rail:

|                                                                                                                                                           |                           |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|
| Tram connecting Southwest Placer County to Sacramento via Watt Avenue to I-80/Watt light rail station                                                     | see Eastern I-80 corridor |
| New commuter rail service between Placer, Sacramento, and Yolo with Placer County stops in Rocklin and Roseville (30-minute frequency in the peak period) | see Eastern I-80 corridor |

#### New/Expanded Roads:

|                                                                                                                                                                                                           |       |   |   |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|---|---|
| New four-lane Placer Parkway connector (ultimate six-lanes) in 500 ft.—1000 ft. wide corridor connecting State Route 70/99 (between Riego Road and Sankey Road) to State Route 65 (Whitney Ranch Parkway) | \$585 | X |   |
| Placer Ranch Parkway East upgraded to six-lane freeway from State Route 65 west to State Route 70/99 with interchanges at Foothills Boulevard, Fiddymont Road, and Watt Avenue                            | \$145 |   | X |
| New four-lane State Route 65 Lincoln Bypass expressway from central Lincoln north to Wise Road, continuing on as a two-lane road north to State Route 65 (Yuba County)                                    | \$325 | X |   |
| Lincoln Bypass expressway upgraded to a four-lane freeway with interchanges                                                                                                                               | \$170 |   | X |

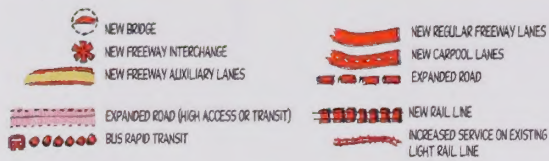
#### Freeway Improvements:

|                                                                                                                 |      |                          |   |
|-----------------------------------------------------------------------------------------------------------------|------|--------------------------|---|
| New State Route 70/99 carpool lanes from I-5 interchange to Sankey Road interchange (Placer Parkway connection) |      | see Sutter-Yuba Corridor |   |
| New State Route 70/99 carpool lanes from the Sankey interchange to State Route 70/99 Y-split                    |      | see Sutter-Yuba Corridor |   |
| New State Route 65 carpool lanes from the I-80 interchange north to Blue Oaks Boulevard                         | \$50 | X                        |   |
| New State Route 65 carpool lanes from Blue Oaks Boulevard north to Industrial Avenue in Lincoln                 | \$37 |                          | X |



**FIGURE**  
**2-12**

## Sutter and Yuba Counties Corridor



### HIGHLIGHTED CORRIDOR PROJECTS

#### Longer Distance Bus:

|                                                                                                                        | Estimated Capital Cost (in millions) | \$ Constrained | \$\$ Plus 10% |
|------------------------------------------------------------------------------------------------------------------------|--------------------------------------|----------------|---------------|
| Expanded express bus service between Marysville/Yuba City to downtown Sacramento via improved State Routes 70 and 99   | included in transit total            | X              |               |
| New express bus service between Marysville/Yuba City to South Placer County via improved State Route 65                | included in transit total            | X              |               |
| Additional new transit includes increased ADA/paratransit and increased local bus services in Yuba City and Marysville | included in transit total            | X              | X             |

#### New Bridges:

|                                                                                   |       |   |   |
|-----------------------------------------------------------------------------------|-------|---|---|
| 5th Street Bridge rebuilt/widened to six lanes                                    | \$100 | X |   |
| 10th Street Bridge (State Route 20) widened to six lanes                          | \$60  | X |   |
| New Feather River Bridge from Bogue Road in Yuba City to Erle Road in Yuba County | \$210 |   | X |

#### New/Expanded Roads:

|                                                                                                                       |       |              |  |
|-----------------------------------------------------------------------------------------------------------------------|-------|--------------|--|
| New two-lane Wheatland Parkway north and east of State Route 65, connecting to the northern end of the Lincoln Bypass | \$150 | X            |  |
| Yuba River Parkway four-lane road from new State Route 65 interchange to Hammonton/Smartville Roads                   | \$96  | X            |  |
| Yuba River Parkway four-lane extension from Hammonton/Smartville Roads over the Yuba River to State Route 20          | \$80  | not included |  |
| New four-lane Township Road connector in Live Oak                                                                     | \$21  | X            |  |
| Unspecified funding for future operational improvements to improve State Route 20 and State Route 70 in Marysville    | \$80  | X            |  |
| Widen Feather River Boulevard to four lanes with a State Route 70 interchange                                         | \$32  | X            |  |

#### New Expanded Freeways and Expressways:

|                                                                                |       |   |  |
|--------------------------------------------------------------------------------|-------|---|--|
| State Route 70 Expressway from Cornelius Avenue to Bear River Bridge           | \$176 | X |  |
| State Route 70 Passing Lanes and Operational improvements to Butte County line | \$40  | X |  |
| New State Route 99 Expressway from State Route 20 to Bogue Road                | \$172 | X |  |
| New Interchange between State Route 99 and State Route 20 in Yuba City         | \$25  | X |  |
| New Riego Road/State Route 99 interchange                                      | \$42  | X |  |



**FIGURE  
2-13**

## Northern Sacramento Corridor



### HIGHLIGHTED CORRIDOR PROJECTS

|                                                                                                                                                                                                      | Estimated Capital Cost (in millions) | \$ Constrained | \$\$ Plus 10% |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|----------------|---------------|
| <b>New Longer Distance Bus:</b>                                                                                                                                                                      |                                      |                |               |
| BRT/Enhanced Bus connecting Natomas to Rocklin/Roseville via Truxel Road, I-80, Riverside and Galleria Boulevard                                                                                     | included in transit total            | X              |               |
| BRT/Enhanced Bus connecting North Sacramento and Natomas to Southwest Placer County via Arden Way/Del Paso Boulevard LRT station to improved Raley Boulevard and North 16th Streets to Baseline Road | included in transit total            | X              |               |
| Expanded freeway express bus services on I-5 and I-80 using the new carpool lanes                                                                                                                    | included in transit total            | X              |               |
| Additional new transit includes increased ADA paratransit, neighborhood shuttles, and increased local bus services through corridor                                                                  | included in transit total            | X              |               |
| <b>New Rail Service:</b>                                                                                                                                                                             |                                      |                |               |
| Downtown-Natomas-Airport line from Sacramento Valley Intermodal Station to Richards Boulevard                                                                                                        | \$37                                 | X              |               |
| Downtown-Natomas-Airport rail extension from Richards Boulevard to Sacramento International Airport                                                                                                  | \$748                                | X              | X             |
| <b>New/Expanded Roads and Bridges:</b>                                                                                                                                                               |                                      |                |               |
| Lower American River Crossing (transit, auto, bike and pedestrian) across the Lower American River, between downtown Sacramento and South Natomas                                                    | \$150                                | X              |               |
| 16th Street/Raley Boulevard expanded to four lanes, creating a thoroughfare between Natomas and Southwest Placer County                                                                              | \$21                                 | X              |               |
| Del Paso Road expanded to six lanes to connect growth areas                                                                                                                                          | \$9                                  | X              |               |
| Elkhorn Boulevard expanded to six lanes to connect growth areas                                                                                                                                      | \$59                                 | X              |               |
| East Commerce Parkway expanded to four/six lanes to provide I-5 parallel capacity                                                                                                                    | \$18                                 | X              |               |
| <b>Freeway Improvements:</b>                                                                                                                                                                         |                                      |                |               |
| New I-5 carpool lanes (I-80 to 70/99)                                                                                                                                                                | \$99                                 | X              |               |
| New I-5 carpool lanes (downtown to I-80) and rebuilt I-5/I-80 interchange                                                                                                                            | \$300                                | X              |               |
| New I-5 carpool lanes (Sacramento International Airport to Woodland)                                                                                                                                 | \$300                                |                | X             |
| New I-80 carpool lanes (Yolo County to Longview Drive/Watt Avenue)                                                                                                                                   | \$200                                | X              |               |
| New State Route 99 carpool lanes (I-5 to Elkhorn Boulevard)                                                                                                                                          |                                      |                |               |
| I-5/State Route 99 interchange rebuilt                                                                                                                                                               | \$125                                | X              |               |
| New Elverta Road/State Route 99 interchange                                                                                                                                                          | \$34                                 | X              |               |



**FIGURE**  
**2-14**

## Yolo/Sacramento Corridor



### HIGHLIGHTED CORRIDOR PROJECTS

#### New Longer Distance Bus

|                                                                                                                                                     | Estimated Capital Cost (in millions) | \$ Constrained | \$\$ Plus 10% |
|-----------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------|----------------|---------------|
| BRT/Enhanced Bus connecting Davis, West Sacramento and Woodland to downtown Sacramento via I-80, I-5, and State Route 113 (current Line 42 routing) | included in transit total            | X              |               |
| Expanded freeway express bus services on I-5 and I-80 between Davis, Woodland and Sacramento, using the new carpool lanes where available           | included in transit total            | X              |               |
| Additional new transit includes increased ADA paratransit, neighborhood shuttles, and increased local bus services through corridor                 | included in transit total            | X              | X             |

#### New Rail

|                                                                                                                                                           |                           |   |  |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------|---|--|
| New streetcar from West Sacramento to downtown Sacramento                                                                                                 | \$70                      | X |  |
| New regional rail service connecting Yolo County to Sacramento to Placer County                                                                           | see Eastern I-80 corridor |   |  |
| New/Expanded Bridges and Roads                                                                                                                            |                           |   |  |
| U.S. 50/Harbor Interchange with Harbor and Industrial Boulevards expanded to six lanes from a widened Palmadessi Bridge to West Capitol (West Sacramento) | \$78                      | X |  |
| New Sacramento River crossing from downtown Sacramento to West Sacramento                                                                                 | \$100                     | X |  |

#### New/Expanded Freeway

|                                                                                                                                                          |                      |   |  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|---|--|
| I-5/ State Route 113 interchange project in Woodland (phase 2 northbound I-5 to southbound State Route 113 freeway to freeway direct connection)         | \$64                 | X |  |
| I-5/ State Route 113 interchange project in Woodland (phase 3 northbound State Route 113 to southbound I-5 freeway to freeway direct connection)         | \$30                 | X |  |
| I-5/U.S. 50 freeway interchange improvements                                                                                                             | see U.S. 50 corridor |   |  |
| New I-80 carpool lanes across the Yolo Causeway from Enterprise Boulevard in West Sacramento to Mace Boulevard in Davis (includes a rebuilt bike bridge) | \$125                | X |  |



## MTP2035 “PLUS 10%” LIST

Analysis shows that even with \$6.8 billion (\$11.5 billion in escalated revenues) of regional funding available, the region cannot fund all regional-scale improvements needed and envisioned in the MTP2035. Furthermore, the state and local counties and cities also lack enough funding for some road, transit, bicycle, and pedestrian improvements that would accommodate projected growth.

A “Plus 10% List” element offers the opportunity to include projects that would not be affordable without additional funding. The budget was set at 10 percent above the MTP2035 to allow for a reasonable amount of additional revenue that may come from transportation sales taxes, development impact fee increases or other revenue sources. There are no completion dates identified for the projects in the “Plus 10% List” because the projects are dependent on



possible future revenues as they become available. Because completion dates do not exist for these projects, they cannot be inflated to expenditure year costs and are therefore reported in current year dollars.

While there are major investments in transit operations and road maintenance in the MTP2035, these areas are chronically under-funded and would benefit from additional funds. Increased transit operating funds would allow expanded bus services sooner, and increased road maintenance funding would cut down the rolling backlog of deferred maintenance. There are also three categories of capital projects in the “Plus 10%”:

- **Capital projects not fully fundable** by the MTP2035, including the full-build Downtown-Natomas-Airport rail extension and the Placer Parkway freeway conversion;

- **Corridor mobility funds** for additional community investments and related improvements such as multi-modal complete streets and safety projects; and

- **Additional capital projects** that the region cannot afford to undertake with current revenues, such as the third Feather River Bridge, Oak Avenue Bridge, and carpool lanes on I-5 to Woodland.

See Appendix A3 for project lists by county.





# Paying for the Plan AND Implementing Projects

IMPLEMENTATION  
OF A LONG-RANGE  
MTP IS CARRIED OUT  
GRADUALLY THROUGH  
SHORTER-TERM  
DECISIONS, WHICH  
ASSIGN STATE OR  
FEDERAL FUNDS TO  
SPECIFIC PROJECTS,  
IN PERIODIC FUNDING  
OR PROGRAMMING  
CYCLES. THE MTP2035  
REPRESENTS THE  
REGION'S CONSENSUS  
ON TRANSPORTATION  
SYSTEM NEEDS OVER  
THE NEXT 28 YEARS.





The funding to support this plan is complex to explain and understand, and comes from many sources—federal, state, and local—each with specific purposes and restrictions, totaling \$41.7 billion<sup>1</sup> during the 28 years, 2008–35. Appendix B2 provides revenue estimates by year, while Appendix B1 provides more detail on the budget assumptions. The region expects the following transportation funding and investments:

- **Federal funds to the region totaling \$6.8 billion<sup>2</sup>**, or 16 percent of the total revenues. Most of the region's funds are federal, but some come from the state. Of these funds, \$1.5 billion<sup>3</sup> must be used for roads and \$2 billion<sup>4</sup> can only be used for transit, with the remaining \$3.3 billion<sup>5</sup> usable for either. Congress has set up most federal programs to build projects. Less than 10 percent of federal funds can be used to pay for maintaining roads or operating transit services.

- **State funds totaling \$9.0 billion<sup>6</sup>**, or 22 percent of the total revenues. The state legislature, like Congress, uses most state programs to build projects, but these state funds also include Caltrans' internal budget, and Caltrans ends up using over three-quarters of these revenues for state highway maintenance and rehabilitation projects.

- **Local funds totaling \$26 billion<sup>7</sup>**, or 62 percent of the total revenues. Of these local funds, \$9.8 billion<sup>8</sup> comes from sales tax source sources and \$8.0 billion<sup>9</sup> from developer-based sources. In terms of transit, the sales tax revenues provide a critical source of funding for transit operations and maintenance because most federal and state funds are focused on capital investments. Developer-based revenue is also a critical funding source—in this case it provides the majority of funding for road capital projects. Chapter 12, Financial Stewardship, offers additional background and discussion on the significant funding limitations and challenges from the region's heavy reliance on sales tax and developer-based revenues.

## WHO DECIDES HOW TO SPEND THE EXPECTED REVENUES?

Of the \$41.7 billion<sup>10</sup>, 16 percent comes to the region, 22 percent belongs to Caltrans, and the remaining 62 percent is available to local agencies (counties, cities and transit districts). Federal law requires urban transportation plans to be financially constrained, limiting what the plan can propose to revenues reasonably expected to be available. The financial forecasts for this plan define opportunities for the region and highlight limits on what the plan can propose to do. Most regional funds come to SACOG, but a portion goes to two other regional transportation planning agencies: the El Dorado County Transportation Commission and the Placer County Transportation Planning Agency.

**The region expects to receive \$6.8 billion<sup>11</sup> in federal and state funding for projects** to fund clean-air programs, community design initiatives, connections serving downtown Sacramento and suburban job centers, more capacity in high-demand corridors, light-rail system extensions, ramp improvements at congested freeway interchanges, improvements to promote bicycle travel, and use of new technologies for better system operations.

**The plan forecasts that Caltrans will receive \$9 billion<sup>12</sup> during the next 28 years for state highways and intercity rail service.** Of this amount, \$7.5 billion<sup>13</sup> will go for state highway maintenance and rehabilitation, from





Caltrans' annual budgets. Another \$900 million<sup>14</sup> will pay for intercity rail service, mainly the Capitol Corridor trains, with 85 percent of it going to operating costs. Caltrans' Division of Rail forecasts that operating costs for the entire San Joaquin Route (Oakland/Sacramento-Bakersfield) through 2035 will be \$1.43 billion. The forecast for operating costs in the SACOG MTP area (from 2008 to 2035) is \$105 million. SACOG expects Caltrans to invest \$2.4 billion<sup>15</sup> (revenues) into state highway improvements in this region, from a program that funds interregional highway improvements statewide. That amount is based on an estimate of this region's share of the larger program, not on what improvements are needed.

**Local agencies control the remaining \$26 billion<sup>16</sup>, with which they must maintain local streets and roads, operate transit services, and fund local improvements.** The plan identifies street and road maintenance and operation of transit services as primarily local responsibilities, with limited regional support, so that regional funds can be used for regional needs. The plan shows \$6 billion<sup>17</sup> available to local agencies for street and road maintenance and rehabilitation. The plan shows \$10 billion<sup>18</sup> for operation of transit services region-wide. The remaining \$10 billion<sup>19</sup> comes from funds largely restricted to construction projects, which local agencies can use for improvements such as traffic signals, turn lanes, street and road widenings, highway interchanges, bike lanes, sidewalks, bus stops and new buses. As



with other funding sources, local agencies face significant funding challenges to meet increasing demand for transportation investments.

### **IMPLEMENTING THE MTP FOR 2035: FROM PLANNING TO PROGRAMMING**

Implementation of a long-range MTP is carried out gradually through shorter-term decisions, which assign state or federal funds to specific projects, in periodic funding or programming cycles. By adopting the MTP2035, the region achieved consensus on transportation system needs over the next 28 years, and this also sets the stage for the short-term strategy to implement the MTP.

The MTP describes general priorities by the years in which individual projects are scheduled to occur, although in the case of larger, more complex projects, the time it takes to get a project ready may stretch out its schedule beyond where its real priority would warrant. The MTP2035 must spread projects through all 28 years covered by the plan, to match the flow of revenues. Because many local agencies want to build most of their projects within the next ten years or so, the scheduling of projects to match availability of revenues tells them that they cannot realistically expect to build all those projects at once, and forces



SACOG and local agencies to collaborate to arrange projects in a priority and schedule order. The schedule for the project list was completed to meet the following objectives:

■ **Balance revenues and expenditures over the 28-year planning period:** Projects must be scheduled to match the pace at which revenues are available to pay for them, proportionally over 28 years, which limits the number of projects that can be planned for any given year and forces decisions about relative priority; this test is called financial constraint.

■ **Support attainment of air quality standards:** The MTP must be analyzed as an overall package via a computer model to verify that its implementation would meet the federal air quality requirements in the region's air quality plan, and the sequence in which projects are scheduled could make a difference in that analysis; this test is called air quality conformity.

As Caltrans, cities, counties, or other local agencies implement projects contained in the MTP, if they want to be eligible to use federal or state funding for a project, either received directly or via the region, the project must be consistent with the MTP. SACOG amends its MTP from time to time, and when it does, it must verify financial constraint if the amendment changes project funding, and air quality conformity if projects are significant enough that they might affect air quality change schedule.

Federal and state laws designate certain funds as regional, and the regional agency decides how those funds are used. Otherwise, most projects are funded by local agencies using local funds. SACOG acts as the regional transportation planning agency (RTPA) under state law for four counties (Sacramento, Sutter, Yolo and Yuba), and under federal law for all six counties in the region (including Placer and El Dorado). Under federal and state law, SACOG receives apportionments of two kinds of federal funds annually—Congestion Mitigation and Air Quality (CMAQ) and Regional Surface Transportation Program (RSTP)—currently amounting to about \$40 million per year. Under state law, SACOG receives a share

of funds through the State Transportation Improvement Program (STIP) every two years, currently amounting to about \$40 million for each two-year cycle. These STIP funds are consistent with the four-year fund estimate and comprised of both state and federal fund sources. These funds are included in the MTP. SACOG indicates in the MTP the types of projects on which it intends to spend regional funds during the 28 years of the plan, and the MTP identifies a long list of specific projects, but the MTP does not specify which funds will be used to build which projects. That is done through a separate process known as programming, which SACOG typically conducts every two years. Programming for federal and state funding in El Dorado and Placer counties is managed separately through the regional transportation planning agencies in each respective county.







Cities, counties, other local agencies and Caltrans carry out the MTP by using available resources to implement the projects designated in the MTP. In programming, SACOG assigns its regional funds in specified amounts to specific projects, shown in a document that SACOG calls the Metropolitan Transportation Improvement Program, or MTIP, which officially becomes this region's part of a broader statewide document called the Federal Transportation Improvement Program (FTIP). When an agency seeks an allocation of federal or state funds to spend on a project, or needs a federal permit to continue project work, federal and state agencies check to see that the project and funding are shown in the MTIP and FTIP; thus the MTIP/FTIP becomes the authorization to use federal funds, not to exceed the amount programmed. Besides authorizing the use of federal funds, the MTIP serves as a current snapshot of progress and schedule for implementing projects, and lays out the commitments of funding that agencies will need to complete those projects in a manner that is consistent with the MTP.

The MTIP is a four-year document under present law. The current MTIP covers the years 2007 to 2010 and expires in October 2008; a new one must be adopted every two years, so the next MTIP is due in mid-2008. SACOG from time to time also amends its MTIP, usually because of a change in project cost or funding or to change project schedules, but occasionally to redefine the scope of a project if the implementing agency changes what it is going to build or do.

The MTP and MTIP are linked in two ways. First, any project to be programmed in the MTIP must be consistent with the MTP or it cannot be eligible for federal or state funding. Second, although SACOG does not have to program projects exactly according to the timing and cost laid out in the MTP, once it does program projects from the MTP into the MTIP for funding in the immediately upcoming two to four years, the MTIP supersedes the MTP; in essence, the MTIP becomes the first four years of the plan. A new MTIP or amendment to the MTIP will often have to be accompanied with an amendment to the MTP to keep them consistent with each other.

The MTP and the MTIP thus form a two-step plan and implementation process. Because of federal and state laws and regulations, the process to keep the MTIP and MTP current and consistent is not simple. SACOG must provide for public review, as specified in its Public Participation Plan. SACOG must also verify financial constraint: for the MTP, the total cost of projects and activities cannot exceed an estimate of funds reasonably expected to be available going out to 2035, determined according to various assumptions described in the plan about funding in the future. For the MTIP, the test is much tighter; funds must be available from existing sources, and the MTIP assigns those funds to specific projects and types of work—and the MTIP must be amended to change that. Finally, SACOG must verify air quality conformity, which in effect shows that projects in the MTIP and MTP produce air pollution emissions no greater than allowed by emissions budgets specified in the region's air quality plan (SIP).



Air quality conformity has been a particular challenge in this region in recent years. The process has changed, technical requirements have changed, milestone years have changed, and even the federal clean air standards themselves changed in 2005. The fact that several years ago, the region's air quality plan went out of date has considerably complicated the situation. From time to time since 2003, for periods as long as 15 months, SACOG has been unable to amend its MTIP or MTP to change scope, cost, funding, or schedule for large projects, and some projects have not been able to use to federal funds as programmed or expected. This situation will recur immediately after this MTP is adopted (March 2008), and is expected to last about eight months until the region's new air quality plan has been completed and approved (January or February 2009).

The current MTIP, adopted in 2006, spans the years 2007 to 2010, and all of its projects are being placed into this MTP exactly as they are shown in the MTIP. SACOG comes due to adopt a new MTIP, covering the years 2009 to 2012, in mid-2008. However, SACOG will not be able to analyze

and show air quality conformity in mid-2008, because the old air quality plan is outdated and unusable, and the new one will not have been completed yet. That seemingly would prevent SACOG from adopting its new MTIP in a timely way. SACOG can, however, relying on the air quality conformity of the new MTP, take the projects shown in those first four years in the MTP and export them directly into the new MTIP unchanged (if they conformed for the MTP they would also conform for the MTIP, since the conformity test is done the same way for both). SACOG intends to do this, so it was especially critical to ensure that all projects shown in the MTP for the years 2008 through 2012 have the correct current scope, cost, funding, and schedule, and as a total group they pass the test of







financial constraint. After October 2008, SACOG expects to again be able to amend the MTIP and MTP as needed, to keep project information up to date, and add new projects if new funding becomes available.

The responsibility to complete environmental studies, design, construct and operate projects falls to local agencies and Caltrans. These steps can sometimes take a long time, as long as ten years for large complex projects. The MTP helps lay out when work must start so as to have a good chance to be completed at the time expected. For some projects, local agencies seek federal or state funds through SACOG, and if SACOG programs funds to a project it must be amended into the MTIP, and from that time forward

its project listing in the MTIP must be kept current. The implementing agency sometimes changes a project during this delivery process, and as engineering work progresses, the agency can make more precise cost estimates. These may lead to a need to amend the MTIP (and perhaps the MTP as well) if the agency is relying on federal or state funds to finish the project. As each phase of work becomes ready to proceed, the implementing agency asks SACOG and Caltrans to allocate the amount of federal funds programmed in the MTIP for that phase. If state funds are involved, the California Transportation Commission must also approve the allocation. At this point, if all requirements have been met and all information is shown correctly, the allocation becomes a quick ministerial action, and the agency can then use the funds to reimburse itself as it pays the bills for project work.

## **IMPLEMENTING THE MTP FOR 2035: THE CONGESTION MANAGEMENT PROCESS**

SAFETEA-LU requires Transportation Management Areas (TMAs), which are urbanized areas with a population over 200,000, to address congestion management through a process that provides for safe and effective integrated management and operation of the transportation system. The six counties of the SACOG region comprise a TMA, and as such, are required to include congestion management in the development of performance measures and strategies in the transportation plans.

The Congestion Management Process (CMP) provides information on transportation system performance and alternatives to relieve congestion and improve mobility of persons and goods. The intent of a CMP is identification and implementation of the most efficient operational strategies for existing and future transportation facilities, where congestion is occurring or is expected to occur. At present SACOG's Overall Work Program (OWP) is comprised of local, regional and state agency actions that fulfill the six SAFETEA-LU requirements for the CMP:



■ **Monitoring and evaluation of the performance of the multimodal transportation system:** performed through transit surveys, counts and surveys, traffic impact studies, adopted general plans, capital improvement programs (CIPs), and technical inter-agency efforts.

■ **Definition of congestion management objectives and appropriate performance measures to assess the extent of congestion:** fulfilled by locally adopted level of service (LOS) goals, highway planning and SACOG regional model analyses and their associated regional performance measures.

■ **Establishment of a coordinated program for data collection:** dealt with through traffic count programs, transit surveys, and agency transportation system monitoring efforts.

■ **Identification and evaluation of the anticipated performance and expected benefits of appropriate congestion management strategies:** fulfilled by CIPs, transportation demand management (TDM) programs such as ridesharing, air district programs, intelligent transportation systems efforts, the programming of funds and project implementation.

■ **Identification of an implementation schedule, implementation responsibilities, and possible funding sources for each strategy:** accomplished by local agency CIPs and SACOG's MTIP and MTP.

■ **Implementation of a process for periodic assessment of the effectiveness of implemented strategies:** achieved by transit performance analyses, intersection and link analyses, and level of service status reports that were elements of the MTP technical process and ongoing system monitoring.

---

*MTP revenues are reported in current-year dollars, but are reported here escalated for future years. Escalated revenue assumptions are reported in Appendix B2; Appendices A1 and A2 contain escalated costs for the project lists. The methodology for calculating escalated costs and revenues is in Appendix B1.*

<sup>1</sup>\$71.7 billion in escalated revenues

<sup>2</sup>\$11.5 billion in escalated revenues

<sup>3</sup>\$2.5 billion in escalated revenues

<sup>4</sup>\$3.4 billion in escalated revenues

<sup>5</sup>\$5.6 billion in escalated revenues

<sup>6</sup>\$16.6 billion in escalated revenues

<sup>7</sup>\$43.6 billion in escalated revenues

<sup>8</sup>\$16.4 billion in escalated revenues

<sup>9</sup>\$13.4 billion in escalated revenues

<sup>10</sup>\$71.7 billion in escalated revenues

<sup>11</sup>\$11.5 billion in escalated revenues

<sup>12</sup>\$16.6 billion in escalated revenues

<sup>13</sup>\$13.8 billion in escalated revenues

<sup>14</sup>\$1.7 billion in escalated revenues

<sup>15</sup>\$4.4 billion in escalated revenues

<sup>16</sup>\$43.6 billion in escalated revenues

<sup>17</sup>\$10 billion in escalated revenues

<sup>18</sup>\$16.8 billion in escalated revenues

<sup>19</sup>\$16.8 billion in escalated revenues





# Summary of Plan Performance



AS THE SACRAMENTO  
REGION ADDS TO ITS  
POPULATION AND  
THE BLUEPRINT LAND  
USE PATTERNS ARE  
DEVELOPED, TRAVEL  
PATTERNS WILL  
CHANGE AND NEW  
INVESTMENTS WILL  
OFFER A RANGE OF  
TRANSPORTATION  
OPTIONS.



Because the MTP2035 is a long-range transportation plan, the degree to which it enhances the performance of the region's transportation system over time is a key measure of success. Through the course of the entire MTP process and SACOG's ongoing Congestion Management Process (CMP), the performance focus has been on a set of four critical indicators:

- Vehicle Miles Traveled (VMT) on the region's roadways
- The level of congestion and delay for all travelers, but especially roadway congestion
- Transit ridership and the share of trips made by transit modes
- Travel by non-motorized travel modes (bike and walk) and the share of trips made by those modes

In part, the focus on these indicators began with the adoption of the Metropolitan Transportation Plan for 2025 (MTP2025) in July 2002. Although adopted unanimously by the SACOG Board, the Board was extremely concerned about several worrisome projections presented in that plan:

- VMT growth continuing to outstrip population growth. The plan was based on a projected population growth of 49 percent between 2000 and 2025, but VMT was projected to grow by about 65 percent over the same period. This meant that the average household needed to drive 8 percent more vehicle miles in order to live, work and play in the Sacramento region. Given the air quality problems in the region, and the strong relationship between vehicle emissions and VMT, this trend was a great concern.

- Roadway congestion growth far in excess of growth in VMT. Even with all of the investments in the MTP2025, roadway congestion experienced by the average household was expected to increase by 58 percent. Total region-wide VMT on heavily congested roadways was expected to increase by 230 percent.

- Transit ridership increases, but not by much. The region-wide transit mode share was projected to increase from 1.0 to 1.2 percent of all trips, even with a large increase in transit service.

- Loss in non-motorized mode share. The percentage of trips made by bike and walk modes was projected to decrease from 6.9 percent to 6.6 percent.

The level of concern about these projections was one of the reasons for the initiation of the Blueprint process. The Board hoped that a more comprehensive vision of land use and transportation viewed as an inter-related system would result in better region-wide performance and fulfillment of CMP objectives. This section of the MTP provides an accounting of the progress made in addressing these concerns and reversing these trends.

## ANALYSIS FRAMEWORK AND TOOLS

In evaluating the performance of MTP2035 and the ongoing CMP efforts, two points of reference are used for each key indicator:

- What have been the historic trends for each indicator? How do the projections for MTP2035 affect the historic trends? For each key indicator, actual historic trend data are presented, along with future projections for MTP2035.

- How does MTP2035, taken as the combined effects of a more compact growth projection, and a proposed package of transportation investments





to 2035, compare to what would have unfolded using the prior growth projections and current MTP2025? This alternate point of comparison is defined as the “No Project” alternative.

The main tools used for the transportation analysis of MTP2035 are SACOG’s PLACE3S land use scenario software and databases, and its regional travel demand models. SACOG has been at the forefront of development and application of travel demand modeling tools, and throughout the Blueprint project SACOG worked to improve the ability to capture land use and transportation interrelationships using computer models.

SACOG currently maintains two regional travel demand forecasting models: the Sacramento Regional Travel Demand Model (SACMET), and the Sacramento Regional Activity-Based Simulation Model (SACSIM).

SACMET is a traditional “four-step” travel demand model, originally developed by SACOG in 1994, with major updates 1996, 1999, and 2001. SACMET was used for travel forecasts for the MTPs adopted in 1996, 1999 and 2002. A post-process to more fully capture land use and transportation effects of density, diversity (mix of use), design, and destination (the 4Ds) was developed by SACOG in 2002, as part of the Blueprint project. SACMET plus 4Ds post-processing has been used for regional travel forecasts for the MTP workshops, evaluation and screening of preliminary project alternatives, and for evaluation of the final MTP.



SACSIM is a newly developed activity-based tour model. While SACMET represents land use data in a system of 1503 traffic analysis zones (TAZs) with median size of 300 acres, SACSIM represents land uses at parcel level. SACSIM represents travel activities as “tours” or series of trips connecting activities a person engages in during the course of a normal day. These aspects of SACSIM are cutting-edge features for a regional travel model and have the potential for capturing more aspects of land use and transportation interactions, as well as the effects of demographic changes—like aging of the population—on travel.

Both SACMET and SACSIM are fully operational travel demand models, with validation results well within published guidelines for regional travel demand models. Both models are being maintained and used to allow for comparison of results, and to allow more time to refine and fully understand and utilize SACSIM as a tool for transportation planning. Over time, SACOG expects to move from SACMET to SACSIM as the primary platform for regional travel forecasts. At this point in its development, it is believed that SACSIM may be slightly less sensitive to some 4D’s land use factors than is SACMET plus 4Ds, which results in the more conservative SACSIM forecasts. SACMET results are provided in addition to SACSIM where noted on tables and figures.



## VEHICLE MILES TRAVELED

A “VMT” is literally one vehicle traveling on a roadway for one mile. Regardless of how many people are traveling in the vehicle, each vehicle traveling on a roadway within the Sacramento region generates one VMT for each mile it travels. For this report and most of SACOG’s technical analysis, VMT is estimated and projected for a typical weekday.

**VMT is and has been a primary indicator of travel for policy-makers and transportation professionals for decades.** The primacy of this measure is due to several factors:

**First, it is relatively easy to measure** by counting traffic on roadways at different locations. It is one of the few measures of transportation performance that has been consistently and comprehensively monitored and documented over time in the Sacramento region.

**Second, VMT bears a strong and direct relationship to vehicle emissions**—with very few exceptions, more VMT in the Sacramento region will result in more emissions from vehicles into the air we breathe.

**Third, VMT can be influenced by policy** in a number of different ways. By providing more attractive alternatives to driving alone, VMT can be reduced by shifting from vehicle to non-vehicle modes (i.e., from a car trip to a bike or walk trip), or from low occupancy to higher occupancy vehicles (i.e., from a single-occupant vehicle trip to a carpool or transit trip). VMT can be influenced by land use patterns as well. A better mix of residential, employment, education, and service uses in an area can allow people to accomplish their daily activities with less driving, and consequently, less VMT.

**Fourth, VMT correlates with congestion.** The more miles people are driving their vehicles, the more vehicles there are on the roadways at any given time, and higher numbers of vehicles eventually result in congestion.

### *Observed Data and Historic Trends in VMT*

Observed VMT is collected by Caltrans as part of the Highway Performance Monitoring System (HPMS). HPMS

is based on a sampling approach, in which a sample of roadways of different types (freeway, rural highway, principal arterial, etc.) are counted, and statistically expanded to estimate total VMT in different areas within the State. Table 4-1 provides a county-by-county tabulation of VMT within the SACOG region for the 1995 through 2005. Figure 4-2 provides a year-by-year portrait of total VMT growth over that time period.

■ Daily VMT in the SACOG region has grown by 28 percent over 10 years, from 43 million per day in 1995 to 55 million per day in 2005.

■ Over this same period, the total number of dwelling units in the SACOG region increased 21 percent, from 683,000 to 829,000.

■ The average annual growth rate in VMT over this period was 2.5 percent.





- The comparable growth rate for dwelling units in the region over the same period was 2.0 percent per year.

- To put these differences in context, the number of dwelling units would double in 35 years at 2.0 percent annual growth; VMT would double seven years sooner at 2.5 percent growth.

**It was the continuance of this historic trend that was one subject of great concern in the MTP2025: that plan was based on population projections growing at 1.6 percent per year, with that plan resulting in VMT growing at 2.0 percent per year.**

## VMT AND MTP2035

Table 4-2 and Figure 4-2 provide tabulations and illustrations of historic and projected VMT growth for MTP2035 and for No Project conditions.

Daily VMT in the SACOG region is projected to grow from 55 million in 2005 to about 85 million in 2035. This represents an increase of about 53 percent over that time period. The projected increase in dwelling units over the same time period is 60 percent.

**The VMT growth rate through 2035 is projected to decrease from the historic growth rate of 2.5 percent per year to 1.4 percent per year. Moreover, the VMT growth rate is projected to be lower than the population growth rate of 1.6 percent. This represents a major reversal of the historic trend in VMT and population growth in the region.**

The No Project alternative, which combines the pre-Blueprint projected growth allocation, extended out to 2035, and the current 2006 MTP (a minor update of MTP2025) package of transportation investments, would result in a total VMT in 2035 of nearly 91 million, or nearly 6 million more than the MTP2035 projection. This represents an increase from 2005 of 64 percent, or an annual growth rate of 1.7 percent.

## *Other Dimensions of VMT in the SACOG Region*

Table 4-2 and Figure 4-2 illustrate changes in total, region-wide VMT for the MTP2035 and No Project scenarios. Other dimensions of VMT growth and change have been the focus of analysis and public discussion throughout the MTP. One such VMT measure is household VMT. Household VMT is defined as all of the VMT generated by residents of households in the SACOG region in the course of their daily activities. Household VMT is a subset of total VMT, and excludes VMT generated by commercial vehicles (e.g., trucks, delivery vans, construction vehicles, etc.), and VMT generated by “external travelers” (i.e., travelers passing through the region, or travel to the SACOG region by residents of other regions).

One reason household VMT is of such interest is that it is believed to be more responsive to both land use changes and transportation system changes than are commercial vehicles or external travelers. Commercial vehicles and external travel are influenced by factors outside of the SACOG region, such as national trends and markets for goods movement, growth and development in neighboring regions. Household VMT is a measure that focuses more on factors that can be controlled within the SACOG region.

Table 4-3 provides a tabulation of household, commercial vehicle and external VMT in the SACOG region for 2005 and 2035. **Average household VMT (i.e., the household VMT divided by the number of households) is projected to decrease from its 2005 average of 51.7 miles to about 46.3 to 48.7 miles for MTP2035, a decrease of 6 to 10 percent.** The 2035 No Project scenario was projected to increase from 2005 to 52.9. MTP2035 is 8 to 12 percent lower than the 2035 No Project scenario.



**TABLE  
4-1**

**Daily VMT in SACOG Region  
1995–2005**

| County                                     | Daily VMT (in thousands) <sup>1</sup> |         |         | Average Annual Growth Rates |         |         |
|--------------------------------------------|---------------------------------------|---------|---------|-----------------------------|---------|---------|
|                                            | 1995                                  | 2000    | 2005    | '95-'00                     | '00-'05 | '95-'05 |
| El Dorado <sup>3</sup>                     | 3,186                                 | 3,687   | 3,987   | 3.0%                        | 1.6%    | 2.3%    |
| Placer <sup>3</sup>                        | 6,614                                 | 7,603   | 9,343   | 2.8%                        | 4.2%    | 3.5%    |
| Sacramento                                 | 25,226                                | 27,582  | 32,145  | 1.8%                        | 3.1%    | 2.5%    |
| Sutter                                     | 1,937                                 | 2,141   | 2,374   | 2.0%                        | 2.1%    | 2.1%    |
| Yolo                                       | 4,630                                 | 5,055   | 5,683   | 1.8%                        | 2.4%    | 2.1%    |
| Yuba                                       | 1,519                                 | 1,655   | 1,849   | 1.7%                        | 2.2%    | 2.0%    |
| <b>Total</b>                               | 43,112                                | 47,723  | 55,381  | 2.1%                        | 3.0%    | 2.5%    |
| SACOG Region Dwelling Units <sup>2,3</sup> | 683,204                               | 732,440 | 828,885 | 1.4%                        | 2.5%    | 2.0%    |

Source: SACOG, July 2008

**Notes:**

<sup>1</sup>1995 and 2000 data from Assembly of Statistical Reports, California Department of Transportation. 2005 data from California Public Road Data, California Department of Transportation.

<sup>2</sup>California Department of Finance

<sup>3</sup>Excludes Tahoe Basin. Adjustments to county totals by SACOG

**TABLE  
4-2**

**Daily VMT in SACOG Region  
1995–2035**

| County                                   | Daily VMT by Year (in thousands) <sup>1</sup> |         |           |           | VMT Average Annual Growth Rates |                |                |                | No Project Comparison /4/ |                     |
|------------------------------------------|-----------------------------------------------|---------|-----------|-----------|---------------------------------|----------------|----------------|----------------|---------------------------|---------------------|
|                                          | 1995                                          | 2005    | 2018      | 2035      | '95-'05 Actual                  | '05-'18 w/ MTP | '18-'35 w/ MTP | '05-'35 w/ MTP | 2035                      | '05-'35 Growth Rate |
| El Dorado <sup>3</sup>                   | 3,186                                         | 3,987   | 4,851     | 5,581     | 2.3%                            | 1.5%           | 0.8%           | 1.1%           | 5,961                     | 1.3%                |
| Placer <sup>3</sup>                      | 6,614                                         | 9,343   | 12,481    | 15,996    | 3.5%                            | 2.3%           | 1.5%           | 1.8%           | 17,087                    | 2.0%                |
| Sacramento                               | 25,226                                        | 32,145  | 39,780    | 48,162    | 2.5%                            | 1.7%           | 1.1%           | 1.4%           | 51,444                    | 1.6%                |
| Sutter                                   | 1,937                                         | 2,374   | 3,012     | 3,635     | 2.1%                            | 1.8%           | 1.1%           | 1.4%           | 3,883                     | 1.7%                |
| Yolo                                     | 4,630                                         | 5,683   | 6,911     | 8,261     | 2.1%                            | 1.5%           | 1.1%           | 1.3%           | 8,824                     | 1.5%                |
| Yuba                                     | 1,519                                         | 1,849   | 2,543     | 3,244     | 2.0%                            | 2.5%           | 1.4%           | 1.9%           | 3,465                     | 2.1%                |
| <b>Total</b>                             | 43,112                                        | 55,381  | 69,578    | 84,879    | 2.5%                            | 1.8%           | 1.2%           | 1.4%           | 90,664                    | 1.7%                |
| SACOG Region Dwelling Units <sup>2</sup> | 683,204                                       | 828,885 | 1,042,054 | 1,324,352 | 2.0%                            | 1.8%           | 1.4%           | 1.6%           | 1,351,598                 | 1.6%                |

Source: SACOG, July 2008

**Notes:**

<sup>1</sup>1995 and 2005 data from California Department of Transportation, based on HPMS reports. 2018 and 2035 are from SACOG forecasts of travel demand in the SACOG region

<sup>2</sup>1995 and 2005 dwellings from California Department of Finance, adjusted by SACOG to exclude Tahoe Basin 2018 and 2035 dwellings from SACOG projections, adjusted to include Tahoe Basin.

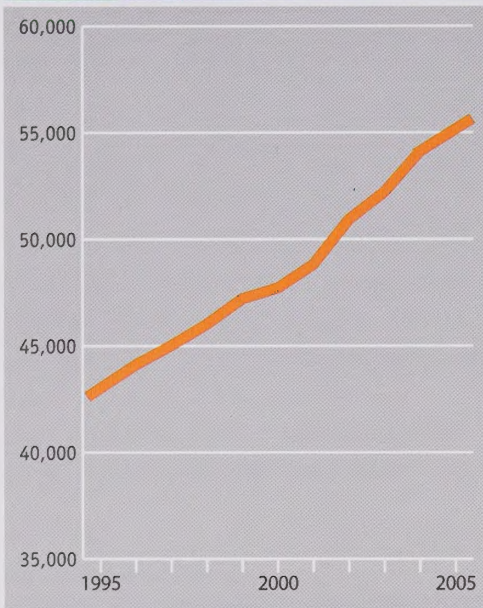
<sup>3</sup>Excludes Tahoe Basin. Adjustments to county totals by SACOG.

<sup>4</sup>"No Project" = 2006 MTP Projects + Pre-Blueprint Land Use Growth Allocation



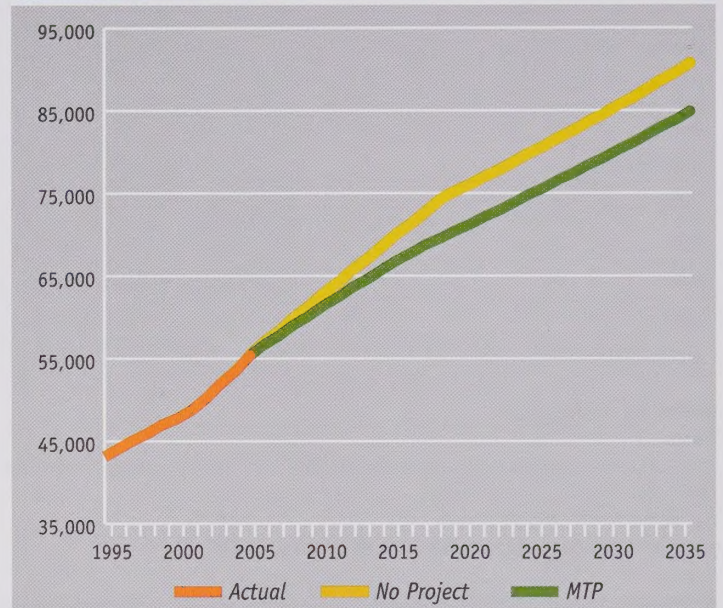


**FIGURE 4-1** Daily Vehicle Miles Traveled in SACOG region, 1995–2005 in thousands



Source: SACOG, July 2008

**FIGURE 4-2** Daily Vehicle Miles Traveled in SACOG region, forecasted to 2035 in thousands



Source: SACOG, July 2008

**TABLE 4-3** Household, Commercial Vehicle, and External VMT 2005–2035

| VMT Indicator                                            | Year / Scenario |                                    |                 |
|----------------------------------------------------------|-----------------|------------------------------------|-----------------|
|                                                          | 2005            | 2035 w/MTP Low – High <sup>3</sup> | 2035 No Project |
| Total Households in SACOG Region <sup>1</sup>            | 787,441         | 1,258,134                          | 1,284,018       |
| Total Household VMT (in 1000's) <sup>2</sup>             | 40,695          | <b>58,261</b> to 61,271            | 67,860          |
| Comm'l Vehicle, External VMT (in thousands) <sup>2</sup> | 14,686          | 23,608                             | 22,804          |
| Total VMT (in thousands)                                 | 55,381          | <b>81,869</b> to 84,879            | 90,664          |
| Average Household VMT                                    | 51.7            | <b>46.3</b> to 48.7                | 52.9            |
| % Change in Average Household VMT from 2005              | n/a             | <b>-10%</b> to -6%                 | + 2%            |
| % Difference in Average Household VMT from No Project    | - 2%            | <b>-12%</b> to -8%                 | n/a             |

Source: SACOG, July 2008

**Notes:**

<sup>1</sup>Households are occupied dwelling units

<sup>2</sup>VMT estimates by source based on SACOG's SACSIM travel demand model

<sup>3</sup>Range is based on SACMET+4Ds and SACSIM travel model forecasts. SACMET+4Ds results in bold italics



## ROADWAY CONGESTION AND DELAY

Roadway congestion is an indicator with a much less specific and determined definition than VMT. **In general, congestion occurs on roadways when the number of drivers who wish to use a particular route exceeds the capacity of that route.** The typical signs of congestion are stop-and-go driving conditions on freeways, lines of drivers and vehicles waiting to get through a traffic light or from a ramp onto a freeway, and the accompanying frustration experienced by those drivers and passengers.

**“Delay” in general refers to time wasted traveling on congested facilities.** However, to quantify that delay requires some presumption of what time it should take to travel on a particular route, or a standard travel time which drivers and passengers should expect. Setting a standard by which delay can be quantified is a subjective exercise. For example, some might define a standard travel time as “free-flow” or totally uncongested conditions. The standard for freeways by this definition might be 60 mph, and the “standard” travel time would be 1 minute for a one-mile stretch of freeway. If the actual travel speed, with congestion, was 40 mph, the travel time would be 1.5 minutes, and the delay for each driver and passenger in that condition would be 30 seconds. Others may define the standard as a modest or “tolerable” level of congestion. For the same one-mile stretch of freeway, someone might define 35 mph as the standard for measurement of delay—this is approximately the speed of travel for optimal throughput on a freeway lane. With the same actual travel speed of 40 mph, no delay



would be experienced, because the actual speed is higher than the standard.

For this and other reasons, SACOG has always focused more on the presence of congestion on roadways rather than amount of delay. Specifically, SACOG estimates and tracks how much of the total VMT occurs on roadways that are at or above their reasonable capacities. **SACOG defines a congested VMT (CVMT) as a VMT that occurs on roadways with volume-to-capacity ratios of 1.0 or greater.** An example of CVMT is a vehicle and its driver and passengers going westbound on I-80 in the morning commute period between Madison Avenue and the I-80/Capital City Freeway split, or on Hazel Avenue between Madison Avenue and Winding Way during commute hours.

## OBSERVED DATA AND HISTORIC TRENDS IN ROADWAY CONGESTION AND THE CONGESTION MANAGEMENT PLAN (CMP)

While VMT has been consistently and comprehensively monitored in the SACOG region since the mid-1990s, monitoring of congestion and delay has been inconsistent. Three sources are used to inform the CMP.

**Delay data have been collected by Caltrans, primarily on freeway facilities, since 1998.** Caltrans defines 35 mph as a travel speed standard for freeways, with delay calculated as the difference between actual travel time and travel time at 35 mph for the vehicles on the roadway segment in question. Caltrans does actual field data collec-



tion for this measure on an annual basis. Freeway delay by this measure is presented in Table 4-4 and Figure 4-3.

- Observed delay has generally increased from 1998 to 2006, although the year-by-year measures sometimes go down as well as up.

- Vehicle delay on freeways was estimated to be as low as 2.0 million hours in 1998 to as high as 5.5 million in 2005.

- Over the years 1998 to 2006, the total increase in vehicle delay was 75 percent, or an annual growth rate of 7 percent. As a point of comparison, growth in VMT over same period was 2.7 percent per year, less than one-half the rate of growth in vehicle delay.

**Delay estimates have been made for the Sacramento urbanized area (as well as most other urbanized areas in the U.S.) by the Texas Transportation Institute (TTI) annually since 1990** (Table 4-4 and Figure 4-4). Although not the product of actual field data collection, this source is presented because it is a well-vetted, consistently applied estimation approach. The standard for delay in the TTI reports is “free-flow” conditions, compared to 35 mph for the Caltrans measure. TTI considers arterial and surface street conditions as well as freeways. Finally, TTI attempts to account for vehicle occupancy, and estimate passenger delay, rather than vehicle delay. For all of these reasons, the TTI measure is a much bigger number than the Caltrans measure, but it shows similar growth.

- Annual hours of passenger delay was estimated to increase from 15.7 million hours in 1990 to 35.9 million hours in 2003, a total increase of 128 percent.

- The growth rate in congestion over the years 1990 to 1998 was 4 percent (compared to VMT growth of 2.2 percent over the same period).

- In the time period from 1998 to 2003, congestion growth was sharply higher, increasing an average of 10 percent per year, compared to 2.7 percent growth in VMT over the same period.

- **Over the longest period in the data series (1990 to 2003), delay grew by an average of 7 percent per year compared to 2 or 3 percent growth in VMT over the same period.**

**Using its travel demand models, SACOG estimates congested VMT; backcasts to 1995 are provided on Table 4-4.** Again, this measure does not attempt to estimate delay, but only the VMT that occurs on heavily congested roadways.

- Congested VMT was estimated to have grown from 2.1 million to 3.4 million between 1995 and 2005.

- The growth rate in congested VMT during these years was 5 percent, compared to about 7 percent for the longest span in the Caltrans and TTI measures. Because these other measures focused on delay, which accounts for time delay in extremely congested roadways, the growth rate is somewhat higher.

By all measures, growth in congestion is at least double the growth rate in VMT, and triple the growth rate in dwelling units over comparable time periods. It makes sense that congestion and delay grow faster than VMT: a roadway operating near capacity experiences little or no congestion or delay, but addition of a few more vehicles and VMT leads to congestion and delay, not just for the new vehicles, but also for all other vehicles using the road.



## CONGESTED VMT AND THE MTP2035

Estimates of congested VMT in the future were made using SACOG's travel demand models, and are shown in Table 4-5 and Figure 4-5.

Congested VMT was estimated to increase from 3.1 million daily miles in 2005 to 7 million in 2035 with MTP2035. This is a total increase of 127 percent, and an average annual increase of 2.8 percent over the same time period. This increase is significantly higher than the growth in VMT (1.4 percent) or in population growth (1.6 percent) in the region.

**The growth rate in congested travel, however, is considerably reduced over the course of the planning period. The historic growth rate is approximately 5 percent per year. This rate decreases marginally to 4.2 percent in the early years of the planning period (2005 to 2018), and drops dramatically to 1.7 percent per year in the later years of the planning period (2018 to 2035).**

The performance of MTP2035 is also dramatically better than the No Project alternative. By 2035 with the No Project alternative, total congestion nearly quadruples to over 12.1 million miles per day. This is a growth rate of 4.7 percent per year, a continuation of the recent growth in congestion.

## OTHER DIMENSIONS OF CONGESTED TRAVEL IN THE SACOG REGION

Table 4-6 provides a tabulation of household, commercial vehicle and external congested VMT in the SACOG region for 2005 and 2035. Analogous to the household VMT measure presented in Table 4-3 above, Table 4-6 provides a tabulation of average household congested VMT (i.e., the household congested VMT divided by the number of households). **Congested VMT per household is projected to increase from its 2005 average of 3.1 miles per household to 3.7 miles per household for MTP2035, an increase of 12 to 18 percent. The 2035 No Project scenario, however, was projected to increase from the 2005 average to approximately 6.7 miles per household, an increase of 14 percent from 2005.**



TABLE  
4-4

Congestion in the SACOG Region  
1990-2006

| Congestion Indicator                                              | Year   |        |        |        |        |       |       | Average Annual Growth Rates <sup>3</sup> |            |            |            |            |            |
|-------------------------------------------------------------------|--------|--------|--------|--------|--------|-------|-------|------------------------------------------|------------|------------|------------|------------|------------|
|                                                                   | 1990   | 1995   | 1998   | 2000   | 2003   | 2005  | 2006  | '90 to '98                               | '98 to '03 | '98 to '05 | '90 to '03 | '95 to '05 | '98 to '06 |
| Annual Freeway Vehicle Hours of Delay (in thousands) <sup>1</sup> | n/a    | n/a    | 1,952  | 2,435  | 3,307  | 5,458 | 3,419 | n/a                                      | + 11%      | + 16%      | n/a        | n/a        | + 7%       |
| Annual Passenger Hours of Delay (in thousands) <sup>2</sup>       | 15,745 | 17,206 | 22,196 | 26,337 | 35,929 | n/a   | n/a   | + 4%                                     | + 10%      | n/a        | + 7%       | n/a        | n/a        |
| Daily Congested VMT <sup>4</sup>                                  | n/a    | 2,099  | n/a    | 2,679  | n/a    | 3,419 | n/a   | n/a                                      | n/a        | n/a        | n/a        | + 5%       | n/a        |

Source: SACOG, July 2008

### Notes:

<sup>1</sup>Highway Congestion Monitoring Program Reports, California Department of Transportation, District 3. Delay defined as the time difference between observed travel time and 35mph on freeways within Caltrans District 3.

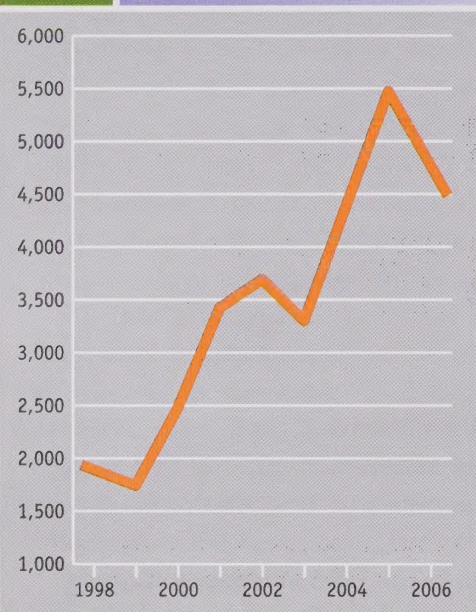
<sup>2</sup>Urban Mobility Report, Sacramento County, Texas Transportation Institute, 2005. Delay difference between free-flow conditions and estimated actual conditions for freeways and arterial roadways within the Sacramento urbanized area.

<sup>3</sup>Growth rates not provided for some years due to unavailability of data for the indicators.

<sup>4</sup>The 2005 CVMT comes from SACOG's travel demand model. Years 1995 and 2000 were back-casted from 2005 based on a portion of the long-term growth rate in delay from the TTI and Caltrans datasets.

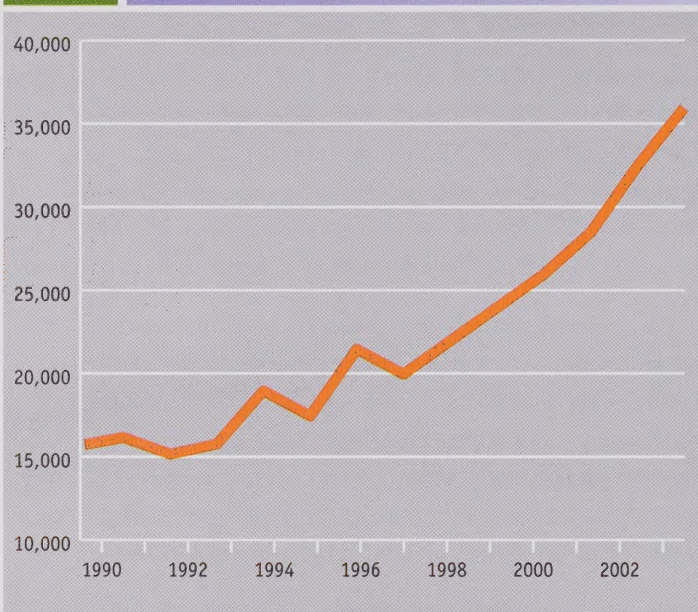


**FIGURE 4-3** Annual Vehicle Hours of Delay On Freeways  
(in thousands)  
Caltrans District 3 Area, 1998–2006



Source: SACOG, July 2008

**FIGURE 4-4** Annual Passenger Hours of Delay, All Roadways  
(in thousands)  
Sacramento Urbanized Area, 1990–2003



Source: SACOG, July 2008

**TABLE 4-5** Roadway Congestion in SACOG Region  
Forecasted to 2035

| Year                                     |                        | Total VMT (in thousands) | Congested VMT (in thousands) <sup>1</sup> | % of VMT Congested |
|------------------------------------------|------------------------|--------------------------|-------------------------------------------|--------------------|
| 1995                                     | Actual                 | 43,112                   | 1,899                                     | 4.4%               |
| 2005                                     | Actual                 | 55,381                   | 3,077                                     | 5.6%               |
| 2018                                     | with MTP               | 69,578                   | 5,235                                     | 7.5%               |
| 2035                                     | with MTP               | 84,879                   | 6,990                                     | 8.2%               |
| <b>Average Annual Growth Rates</b>       |                        |                          |                                           |                    |
| 1995 to 2005                             | Actual                 | 2.5%                     | 5.0%                                      |                    |
| 2005 to 2018                             | with MTP               | 1.9%                     | 4.2%                                      |                    |
| 2018 to 2035                             | with MTP               | 1.1%                     | 1.7%                                      |                    |
| 2005 to 2035                             | with MTP               | 1.4%                     | 2.8%                                      |                    |
| <b>No Project Comparison<sup>2</sup></b> |                        |                          |                                           |                    |
| 2035                                     | No Project VMT         | 90,664                   | 13,478                                    | 13.4%              |
| 2005 to 2035                             | No Project Growth Rate | 1.7%                     | 4.7%                                      |                    |

Source: SACOG, July 2008

**Notes:**

<sup>1</sup>2005 CVMT was estimated by SACOG based on congestion monitoring data base year travel model outputs; 1995 CVMT was back-casted from 2005 by SACOG based on the long term measured growth in delay; 2018 and 2035 from SACOG forecasts of travel demand in the region.

<sup>2</sup>"No Project" = 2006 MTP Projects + Pre-Blueprint Land Use Growth Allocation



**TABLE**  
**4-6**

**Household, Commercial Vehicle, and External Congested Travel  
2005–2035**

| Congested Travel Indicator                                             | Year/Scenario |               |                 |
|------------------------------------------------------------------------|---------------|---------------|-----------------|
|                                                                        | 2005          | 2035 with MTP | 2035 No Project |
| Total Households in SACOG Region <sup>1</sup>                          | 787,400       | 1,258,100     | 1,284,000       |
| Total Household Congested VMT (in thousands) <sup>2</sup>              | 2,457         | 4,617         | 8,591           |
| Commercial Vehicle, External Congested VMT (in thousands) <sup>2</sup> | 620           | 2,373         | 3,540           |
| Total Congested VMT (in thousands)                                     | 3,077         | 6,990         | 12,130          |
| Average Household Congested VMT                                        | 3.1           | 3.7           | 6.7             |
| % Change in Average Household Congested VMT from 2005                  | n/a           | +18%          | +114%           |
| % Difference in Average Household Congested VMT from No Project        | -53%          | -45%          | n/a             |

Source: SACOG, July 2008

**Notes:**

<sup>1</sup>Households are occupied dwelling units

<sup>2</sup>CVMT estimates by source based on SACOG's SACSIM travel demand model

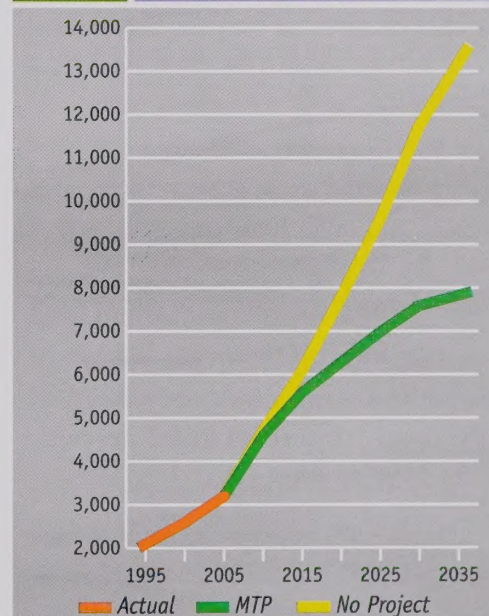
## TRAVEL BY TRANSIT AND NON-MOTORIZED TRAVEL MODES

Travel by transit is of great interest in the Sacramento region for several reasons. First, transit provides an opportunity for substantially reducing VMT, through shifts from low-occupancy modes like driving alone to a very high occupancy mode of travel. Second, for commute trips, which tend to occur at peak periods of travel demand when congestion is highest, transit can provide substantial congestion relief. Finally, quality transit service can provide necessary mobility to residents and employees in higher density, mixed-use areas, where auto travel can be impractical.

Travel by non-motorized travel modes is also of interest, because the prevalence of travel by the major non-motorized travel modes (bicycling and walking) is a strong indicator of good land use and transportation planning. By placing complementary land uses in close proximity between residents or employees of an area, and by developing attractive, convenient pedestrian and bicycle environments, the number and percentage of trips made by bicycle or on foot should increase.

**FIGURE**  
**4-5**

**Daily Congested  
Vehicle Miles Traveled**  
(in thousands)  
SACOG Region, 1995–2035



Source: SACOG, July 2008 based on SACSIM travel demand model





## OBSERVED DATA AND HISTORIC TRENDS IN TRANSIT RIDERSHIP

Table 4-7 provides a tabulation of key historic estimates of transit and non-motorized travel in the Sacramento region. First, the transit statistics:

- Between 1990 and 2000, transit commuters increased from about 15,500 to 21,200, a 36 percent increase over the decade. **This translates to annual growth of transit commuters of 3.2 percent, more than double the growth rate of workers as a whole (1.5 percent).**
- Over the same period, transit commuters as a share of all workers increased from 2.2 percent to 2.6 percent.
- Non-commute transit did not grow as quickly, increasing from 35,600 trips per weekday in 1990 to 45,300 trips per day in year 2000. This increase slightly exceeded overall growth in population over that time period.
- The share of non-commute trips (i.e., combined shop, school, social/recreational, and other non-work activities) made by transit increased marginally, from 0.7 to 0.8 percent, over the decade.

■ **Combining all trip purposes, transit share increased only marginally, from 1.1 percent to 1.2 percent from 1990 to 2000.**

Table 4-7 also reports estimates of bike and walk trips and mode shares. Here, the trends are more worrisome than for transit:

- The absolute number of commuters reporting bike or walk as their primary

mode of commute decreased from 31,300 to 28,300 between 1990 and 2000.

■ **Accounting for growth in the number of workers from 1990 to 2000, this decrease represents a stunning loss of nearly 25% of non-motorized mode share for commuters, dropping from 4.4 percent of all commuters in 1990 to 3.4 percent in 2000.**

■ Data on non-commute bike and walk trips is difficult to assemble for the region. Overall, it is assumed that the share of non-commute bike and walk trips for transportation rather than purely recreational purposes was flat over the decade from 1990 to 2000.

■ **Combining the significant drop in commute bike and walk share, with no growth in the non-commute share, results in an overall decline in bike and walk mode share from 7.6 percent in 1990 to 7.4 percent in 2000.**

The reasons for the decline in bike and walk share are difficult to pinpoint, in part because data on non-commute bike and walk trips is rarely collected and has never been





collected at a regional level in Sacramento, to make definitive evaluations of changes over time. Anecdotally, it is known that bike and walk trips for one key non-commute purpose, trips to and from school, plummeted from 1990 to 2000. Household travel surveys conducted in Sacramento 1990 and 2000, and other national travel surveys, are not totally conclusive, but suggest an increase for some non-school bike and walk activities.

### TRANSIT AND NON-MOTORIZED TRAVEL AND MTP2035

Tables 4-8 and 4-9 provide a tabulation of transit and non-motorized travel for 2005 and forecasts to 2035 for the MTP and No Project alternatives. Figure 4-6 illustrates the growth in transit trips over the planning period; Figure 4-7 illustrates growth in non-motorized transit trips.

**Travel by transit with the MTP2035 alternative shows a remarkable increase over the planning period.** Total transit trips more than triple from 101,000 trips per day in 2005 to 326,000 in 2035. The transit mode share increases from 1.2 to 2.4 percent. **Annual growth in transit trips over the planning period is 4.0 percent per year, more than two times the population growth rate.**

The growth share in commute transit trips is 7.7 percent for the MTP. In other words, 7.7 percent of new commute trips are by transit based on the MTP. The comparable growth share for the No Project alternative is 2.2 percent.

Non-motorized trips increase from 617,000 per day in 2005 to 1,132,000 in 2035, an increase of 83 percent over the planning period. **Total non-motorized mode increases from 7.4 percent to 8.3 percent in the same period. More importantly, the decline in non-motorized mode share is reversed over the planning period.**

The growth share for non-motorized trips is 9.7 percent for the MTP. The comparable growth share for the No Project alternative is 6.9 percent.

For the 2035 No Project alternative, total transit and non-motorized trips increase, but by far less than the MTP2035. For both modes, total growth is less than growth in total travel, and the mode shares for both decrease relative to 2005: transit mode share decreases from 1.2 to 1.1 percent; and non-motorized mode share, from 7.4 to 7.2 percent, continuing the decline in share for non-motorized travel.

### OTHER DIMENSIONS OF TRANSIT AND NON-MOTORIZED TRAVEL

Table 4-10 provides a tabulation of transit and non-motorized trips per household 2005 and 2035 for both the MTP2035 alternative and the No Project alternative.

**Transit trips per household more than double from 0.13 trips per household per day in 2005, to 0.26 to 0.27 trips with MTP2035.** For the 2035 No Project alternative, transit trips per household decrease slightly, to 0.12 trips per day.

**Non-motorized trips per household increase from 0.78 trips per household per day in 2005 to 0.90 to 0.98 trips per household per day with MTP2035.**

Combined transit and non-motorized trips per household per day increase from 0.91 in 2005 to 1.25 with MTP2035, an increase of 20 to 37 percent. Combined transit and non-motorized trips remain flat at 2005 levels for the 2035 No Project alternative.





**TABLE**  
**4-7**

**Transit and Non-Motorized Mode Shares**

*In SACOG Region, 1990 and 2000*

| Travel Mode Indicator                      | Year<br>Average Annual Growth Rate |           |         |
|--------------------------------------------|------------------------------------|-----------|---------|
|                                            | 1990                               | 2000      | 1990-00 |
| <b>Workers By Commute Mode<sup>1</sup></b> |                                    |           |         |
| By Public Transit                          | 15,546                             | 21,223    | + 3.2%  |
| By Bike or Walk                            | 31,276                             | 28,267    | - 1.0%  |
| Total Workers                              | 711,386                            | 828,452   | + 1.5%  |
| Public Transit Share                       | 2.2%                               | 2.6%      | + 1.6%  |
| Bike+Walk Share                            | 4.4%                               | 3.4%      | - 2.5%  |
| <b>All Non-Work Person Trips</b>           |                                    |           |         |
| By Public Transit <sup>2,3</sup>           | 35,567                             | 45,339    | + 2.5%  |
| By Bike or Walk <sup>2</sup>               | 414,093                            | 486,329   | + 1.6%  |
| Total Person Trips <sup>2</sup>            | 4,801,028                          | 5,638,541 | + 1.6%  |
| Public Transit Share                       | 0.7%                               | 0.8%      | + 0.8%  |
| Bike+Walk Share                            | 8.6%                               | 8.6%      | 0.0%    |
| <b>All Person Trips<sup>4</sup></b>        |                                    |           |         |
| By Public Transit                          | 68,438                             | 87,239    | + 2.5%  |
| By Bike or Walk                            | 479,772                            | 545,689   | + 1.3%  |
| Total Person Trips                         | 6,282,365                          | 7,378,290 | + 1.6%  |
| Public Transit Share                       | 1.1%                               | 1.2%      | + 0.8%  |
| Bike+Walk Share                            | 7.6%                               | 7.4%      | - 0.3%  |

**Source:** SACOG, July 2008

**Notes:**

<sup>1</sup>U.S. Census Bureau statistics for SACOG region are for workers, not trips

<sup>2</sup>SACOG Household Travel Surveys for 1990-1991 and 2000. Statistics are person trips

<sup>3</sup>SACOG On-Board Transit Surveys for 1994 and 1999, interpolated to 1990 and 2000

<sup>4</sup>Combine U.S. Census Bureau and local survey statistics



**TABLE**  
**4-8**

**Weekday Transit Trip Shares, SACOG Region  
Forecasted to 2035**

| Travel Mode Indicator                                     | Year   |         |         |         | Annual Average Growth Rate |            |            |            | No Project Comparison |                        |
|-----------------------------------------------------------|--------|---------|---------|---------|----------------------------|------------|------------|------------|-----------------------|------------------------|
|                                                           | 2000   | 2005    | 2018    | 2035    | '00 to '05                 | '05 to '08 | '18 to '35 | '05 to '35 | 2035                  | '05 to '35 Growth Rate |
| <b>Person Trips By Transit<sup>1</sup></b>                |        |         |         |         |                            |            |            |            |                       |                        |
| Commute/Work                                              | 41,900 | 48,647  | 85,189  | 167,921 | + 3.0%                     | + 4.4%     | + 4.1%     | + 4.2%     | 85,443                | + 1.9%                 |
| Other                                                     | 45,339 | 52,638  | 75,983  | 158,744 | + 3.0%                     | + 2.9%     | + 4.4%     | + 3.7%     | 73,981                | + 1.1%                 |
| Total Transit                                             | 87,239 | 101,285 | 161,172 | 326,665 | + 3.0%                     | + 3.6%     | + 4.2%     | + 4.0%     | 159,424               | + 1.5%                 |
| <b>All Person Trips (in thousands)</b>                    |        |         |         |         |                            |            |            |            |                       |                        |
| Commute/Work                                              | 1,844  | 1,979   | 2,784   | 3,528   | + 1.4%                     | + 2.7%     | + 1.4%     | + 1.9%     | 3,656                 | + 2.1%                 |
| Other                                                     | 5,543  | 6,415   | 7,916   | 10,090  | + 3.0%                     | + 1.6%     | + 1.4%     | + 1.5%     | 10,511                | + 1.7%                 |
| All                                                       | 7,378  | 8,395   | 10,699  | 13,618  | + 2.6%                     | + 1.9%     | + 1.4%     | + 1.6%     | 14,166                | + 1.8%                 |
| <b>Transit Mode Share (Total)</b>                         |        |         |         |         |                            |            |            |            |                       |                        |
| Commute/Work                                              | 2.3%   | 2.5%    | 3.1%    | 4.8%    | + 1.6%                     | + 1.7%     | + 2.6%     | + 2.2%     | 2.3%                  | - 0.2%                 |
| Other                                                     | 0.8%   | 0.8%    | 1.0%    | 1.6%    | + 0.1%                     | + 1.2%     | + 2.9%     | + 2.2%     | 0.7%                  | - 0.5%                 |
| Total Transit                                             | 1.2%   | 1.2%    | 1.5%    | 2.4%    | + 0.4%                     | + 1.7%     | + 2.8%     | + 2.3%     | 1.1%                  | - 0.2%                 |
| <b>Transit Mode Share of Growth from 2005<sup>2</sup></b> |        |         |         |         |                            |            |            |            |                       |                        |
| Commute/Work                                              | n/a    | n/a     | 4.5%    | 7.7%    | n/a                        | n/a        | n/a        | n/a        | 2.2%                  | n/a                    |
| Other                                                     | n/a    | n/a     | 1.6%    | 2.9%    | n/a                        | n/a        | n/a        | n/a        | 0.5%                  | n/a                    |
| Total Transit                                             | n/a    | n/a     | 2.6%    | 4.3%    | n/a                        | n/a        | n/a        | n/a        | 1.0%                  | n/a                    |

**Source:** SACOG, July 2008

**Notes:**

<sup>1</sup>2000 is combined U.S. Census data converted to person trips and household survey data; 2005, 2018 and 2035 are combined SACOG travel model forecasts

<sup>2</sup>Growth shares are computed as difference in transit trips between the future year and 2005, divided by difference in total person trips for same years





TABLE  
4-9Weekday Non-Motorized Trip Shares, SACOG Region  
Forecasted to 2035

| Travel Mode Indicator                                 | Year    |         |         |           | Annual Average Growth Rate |            |            |            | No Project Comparison |                     |
|-------------------------------------------------------|---------|---------|---------|-----------|----------------------------|------------|------------|------------|-----------------------|---------------------|
|                                                       | 2000    | 2005    | 2018    | 2035      | '00 to '05                 | '05 to '18 | '18 to '35 | '05 to '35 | 2035                  | '05-'35 Growth Rate |
| By Bike or Walk <sup>1</sup>                          | 545,689 | 617,499 | 819,612 | 1,125,624 | + 2.5%                     | + 2.0%     | + 2.1%     | + 2.0%     | 1,015,751             | + 1.7%              |
| All Person Trips (in thousands)                       | 7,378   | 8,395   | 10,771  | 13,618    | + 2.6%                     | + 1.9%     | + 1.4%     | + 1.6%     | 14,166                | + 1.8%              |
| Bike+Walk Mode Share (Total)                          | 7.4%    | 7.4%    | 7.7%    | 8.3%      | - 0.1%                     | + 0.1%     | + 0.7%     | + 0.4%     | 7.2%                  | - 0.1%              |
| Bike+Walk Mode Share of Growth from 2005 <sup>2</sup> | n/a     | n/a     | 8.8%    | 9.7%      | n/a                        | n/a        | n/a        | n/a        | 6.9%                  | n/a                 |

Source: SACOG, July 2008

**Notes:**

<sup>1</sup>2000 is combined U.S. Census data converted to person trips and household survey data; 2005, 2018 and 2035 are combined SACOG travel model forecasts.

<sup>2</sup>Growth shares are computed as difference in transit trips between the future year and 2005, divided by difference in total person trips for same years.

Table 4-11 provides a tabulation of transit boardings and revenue hours of service for 2005, MTP2035, and the 2035 No Project Alternative. The number of boardings per service hour is a key transit productivity measure. **For MTP2035, overall transit productivity increases from 34 boardings per service hour in 2005, to 46 in 2035, an increase of 35 percent, which in turn increases fare revenues per transit vehicle.** Over the same time period, boardings per service hour for the No Project alternative were forecasted to increase by 6 percent to 37.

## VEHICLE TRAVEL BY ROADWAY CLASS

Table 4-12 presents a tabulation of VMT, vehicle hours of travel (VHT) and average speed for three general classes of roadways: mixed-flow freeways, HOV lanes, and all surface streets and ramps. The statistics are presented for typical weekday and for the combined morning and afternoon peak periods.

- Although VMT increases by about 53 percent, VHT increases are 61 percent, an indication of overall increases in vehicle congestion.

- HOV lanes have the highest growth from Year 2005 in VMT, increasing by 240 percent on a daily basis, and 266 percent during peak periods.

- All classes of roadway show decreases in vehicle speed over the forecast period, but freeways show the sharpest decrease (5 to 7 percent on average).



**TABLE**  
**4-10**

**Transit and Non-Motorized Trips per Household**  
*In SACOG Region Forecasted to 2035*

| Indicator                                                     | Year/Scenario |                     |                 |
|---------------------------------------------------------------|---------------|---------------------|-----------------|
|                                                               | 2005          | 2035 with MTP       | 2035 No Project |
| Total Households in SACOG Region <sup>1</sup>                 | 787,441       | 1,258,134           | 1,284,018       |
| Total Transit Trips <sup>2</sup>                              | 101,285       | 326,665             | 159,424         |
| Total Non-Motorized Trips <sup>2</sup>                        | 617,499       | 1,125,624           | 1,015,751       |
| Transit Trips Per Household                                   | 0.13          | 0.26 to <b>0.27</b> | 0.12            |
| Non-Motorized Trips Per Household                             | 0.78          | 0.89 to <b>0.98</b> | 0.79            |
| Total Transit+Non-Motorized Trips Per Household               | 0.91          | 1.15 to <b>1.25</b> | 0.92            |
| % Change in Average Transit+Non-Motorized Trips from 2005     | n/a           | +26% to <b>+37%</b> | 0%              |
| % Difference in Average Transit+Non-Motorized from No Project | 0%            | +26% to <b>+36%</b> | n/a             |

**Source:** SACOG, July 2008

**Notes:**

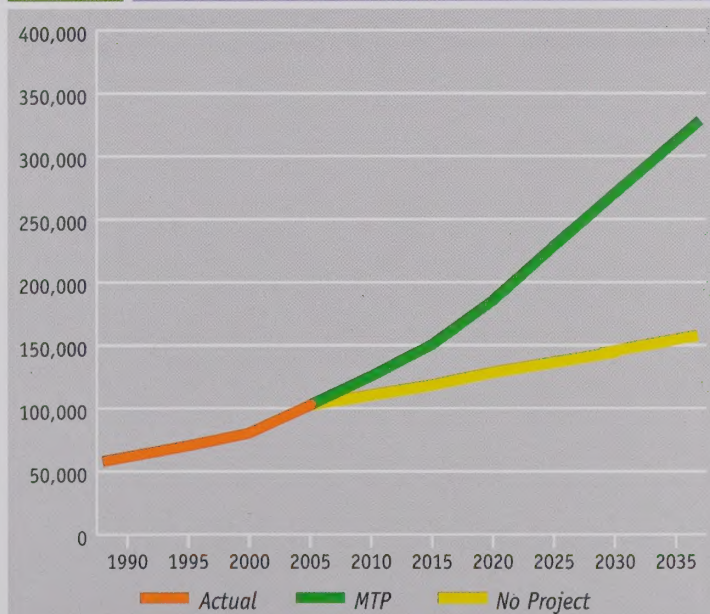
<sup>1</sup>Households = occupied dwelling units

<sup>2</sup>Transit and non-motorized trip estimates by SACOG's travel demand models

<sup>3</sup>Range is based on SACMET+4Ds and SACSIM travel model forecasts. SACMET+4Ds results in bold italics

**FIGURE**  
**4-6**

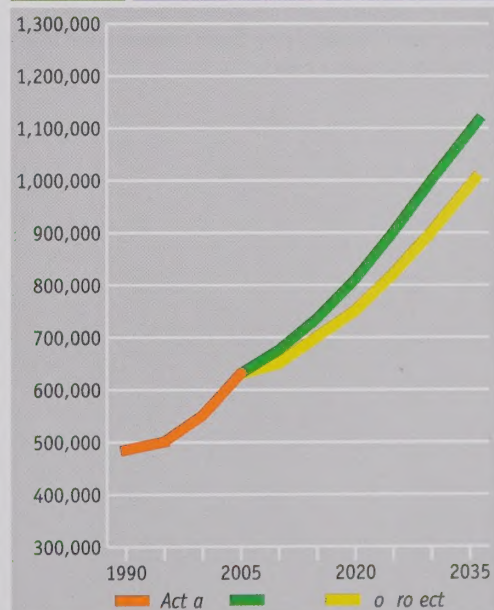
**Daily Transit Person Trips**  
*In SACOG Region, forecasted to 2035*



**Source:** SACOG, July 2008

**FIGURE**  
**4-7**

**Daily Bike and Walk Person Trips**  
*In SACOG Region, forecasted to 2035*



**Source:** SACOG, July 2008





**TABLE**  
**4-11**

**Transit Productivity**  
**2005–2035**

| Transit Indicator                                           | Year/Scenario |               |                 |
|-------------------------------------------------------------|---------------|---------------|-----------------|
|                                                             | 2005          | 2035 with MTP | 2035 No Project |
| <b>Transit Boardings<sup>1</sup></b>                        |               |               |                 |
| Rail (light rail, streetcar)                                | 46,697        | 168,658       | 91,145          |
| All Bus (fixed route, bus rapid transit, commuter, shuttle) | 94,306        | 370,739       | 206,369         |
| All Service Types                                           | 141,003       | 539,397       | 297,514         |
| <b>Transit Service Hours<sup>2</sup></b>                    |               |               |                 |
| Rail (light rail, streetcar)                                | 235           | 680           | 388             |
| All Bus (fixed route, bus rapid transit, commuter, shuttle) | 3,854         | 10,938        | 7,714           |
| All Service Types                                           | 4,089         | 11,617        | 8,102           |
| <b>Boardings per Service Hours</b>                          |               |               |                 |
| Rail (light rail, streetcar)                                | 199.1         | 248.2         | 234.9           |
| All Bus (fixed route, bus rapid transit, commuter, shuttle) | 24.5          | 33.9          | 26.8            |
| All Service Types                                           | 34.5          | 46.4          | 36.7            |
| <b>Change in Transit Productivity from 2005</b>             |               |               |                 |
| Rail (light rail, streetcar)                                | n/a           | + 25%         | + 18%           |
| All Bus (fixed route, bus rapid transit, commuter, shuttle) | n/a           | + 39%         | + 9%            |
| All Service Types                                           | n/a           | + 35%         | + 6%            |

**Source:** SACOG, July 2008

**Notes:**

<sup>1</sup>Boardings estimated with SACOG travel demand models

<sup>2</sup>Service hours calculated from transit networks based route times and service frequencies

<sup>3</sup>Boardings per service hour



**TABLE**  
**4-12**

**Weekday Vehicle Travel by General Roadway Class**  
*In SACOG Region Forecasted to 2035*

| Roadway Class                   | Vehicle Miles Traveled<br>(in thousands) <sup>1</sup> |                           | Vehicle Hours Traveled<br>(in thousands) <sup>1</sup> |              | Average Speed (MPH) |              |
|---------------------------------|-------------------------------------------------------|---------------------------|-------------------------------------------------------|--------------|---------------------|--------------|
|                                 | Daily <sup>2</sup>                                    | Peak Periods <sup>3</sup> | Daily                                                 | Peak Periods | Daily               | Peak Periods |
| <b>2005</b>                     |                                                       |                           |                                                       |              |                     |              |
| Mixed-Flow Freeway              | 23,284                                                | 9,341                     | 446                                                   | 197          | 52.1                | 47.4         |
| HOV                             | 1,137                                                 | 284                       | 21                                                    | 5            | 55.2                | 55.8         |
| Surface Streets+Ramps           | 30,961                                                | 13,186                    | 1,025                                                 | 465          | 30.2                | 28.4         |
| <b>Regionwide Roadway Total</b> | <b>55,381</b>                                         | <b>22,811</b>             | <b>1,492</b>                                          | <b>667</b>   | <b>37.1</b>         | <b>34.2</b>  |
| <b>2035</b>                     |                                                       |                           |                                                       |              |                     |              |
| Mixed-Flow Freeway              | 30,132                                                | 11,921                    | 609                                                   | 270          | 49.5                | 44.1         |
| HOV                             | 3,867                                                 | 1,042                     | 72                                                    | 19           | 54.1                | 54.9         |
| Surface Streets+Ramps           | 50,880                                                | 21,665                    | 1,716                                                 | 782          | 29.7                | 27.7         |
| <b>Regionwide Roadway Total</b> | <b>84,879</b>                                         | <b>34,628</b>             | <b>2,396</b>                                          | <b>1,071</b> | <b>35.4</b>         | <b>32.3</b>  |
| <b>2005 to 2035 Changes</b>     |                                                       |                           |                                                       |              |                     |              |
| Mixed-Flow Freeway              | + 29%                                                 | + 28%                     | + 36%                                                 | + 37%        | - 5%                | - 7%         |
| HOV                             | + 240%                                                | + 266%                    | + 247%                                                | + 272%       | - 2%                | - 2%         |
| Surface Streets+Ramps           | + 64%                                                 | + 64%                     | + 67%                                                 | + 68%        | - 2%                | - 2%         |
| <b>Regionwide Roadway Total</b> | <b>+ 53%</b>                                          | <b>+ 52%</b>              | <b>+ 61%</b>                                          | <b>+ 61%</b> | <b>- 5%</b>         | <b>- 5%</b>  |

**Source:** SACOG, July 2008

**Notes:**

<sup>1</sup>All VMT and VHT estimates based on SACOG's travel demand models.

<sup>2</sup>Daily is typical weekday, including peak periods

<sup>3</sup>Peak periods are combined morning (7:00 a.m.-10:00 a.m.) and evening (3:00 p.m. to 6:00 p.m.) peak periods





C H A P T E R 5

# Policies AND Supportive Strategies



THE MTP2035 IS BUILT  
ON SIX GUIDING  
PRINCIPLES:

SMART LAND USE

ENVIRONMENTAL  
QUALITY AND  
SUSTAINABILITY

FINANCIAL  
STEWARDSHIP

ECONOMIC VITALITY

ACCESS AND MOBILITY

EQUITY AND CHOICE



The purpose of the MTP2035 is to develop an integrated transportation system that advances the six guiding principles adopted by the Board in the fall of 2005:

### **Smart Land Use**

Design a transportation system to support good growth patterns, including increased housing and transportation options, focusing more growth inward and improving the economic viability of rural areas.

### **Environmental Quality and Sustainability**

Minimize direct and indirect transportation impacts on the environment for cleaner air and natural resource protection.

### **Financial Stewardship**

A transportation system that delivers cost-effective results that are feasible to construct and maintain.

### **Economic Vitality**

Efficiently connect people to jobs and get goods to market.

### **Access and Mobility**

Improve opportunities for businesses and citizens to easily access goods, jobs, services and housing.

### **Equity and Choice**

Provide real, viable travel choices for all people throughout our diverse region.

## **TRANSLATING PRINCIPLES TO ACTIONS**

This chapter translates the principles into actions. Policies are higher-level actions, and strategies are more specific actions. SACOG and other partners will implement the policies and strategies, many of which are multi-modal transportation investments identified in the MTP2035 project list.

**The overall philosophy followed in this MTP seeks to:**

- **fit within the “financially constrained” budget** limit that federal regulations require for long-range transportation plans;
- **design a system customized to serve the expected increase** in compact development patterns with more infill redevelopment, mixed uses, and better jobs/housing balance;
- **deal with more short trips** to a better mix of activities in local communities;
- **provide a system that reduces vehicle miles traveled (VMT)** per household, holds growth in congestion even with a huge growth in population, and increases transit mode share significantly;
- **increase transit service significantly**, aimed at improving service for the transit dependent and attracting riders who could otherwise choose to drive, extending rail where it can be cost effective considering surrounding housing and employment densities, and setting up new bus or rail services on corridors connecting suburban activity centers;
- **provide a wider spectrum of transit options**, ranging from commuter rail through light rail, streetcar, bus rapid transit, enhanced bus, express bus, local bus, community shuttles, to paratransit, with better ability to match transit type to the density of surrounding development and service demand;





■ **add carpool lanes** in many interior areas of the freeway system, particularly serving suburban job centers where it will take time to build up job densities to the point that transit becomes a serious option for commuting, and increase frequency of express bus service to get the most out of the capacity on the carpool lanes and give transit a travel time advantage;

■ **focus on ensuring the arterial system performs well** for the increased number of local trips, to support infill and compact development without pushing it outward because of overly congested conditions, providing a strong grid network (which offers alternative routes) wherever land uses and other barriers allow;

■ **develop more road and transit capacity** across the American, Sacramento and Feather rivers, focused on trying to hold local cross-access to no more congestion than today, providing local cross-river transit routes, and minimizing the number of new bridges to be built;

■ **accommodate trucks for goods movement travel** on the highway system to the greatest extent possible and reduce their exposure to and impacts on congestion overall through strategic investments in new freeway lanes, new roadways connecting activity centers, and geometrically improved interchanges;

■ **increase investment in funding for road maintenance** and rehabilitation;



■ **increase investment in funding for traffic operational improvements;**

■ **increase investment in funding for bicycle and pedestrian facilities**, and introduce the concept of “complete streets” designed for many types of users and modes together instead of favoring auto use only;

■ **increase funding investments for all other programs**, including transportation demand management (TDM), air quality, community design, and intelligent transportation systems (ITS); and

■ **increase transportation investments in rural areas** that implement land use policies consistent with the Blueprint and improve their economic viability.

Achieving a fully integrated transportation system will require additional financial resources because the historic funding sources are no longer adequate to meet the growing and changing needs of the region. SACOG will actively pursue an adequate level of funding to implement the plan and address the unmet investment needs.



## IMPORTANT NOTE ON POLICIES AND SUPPORTING STRATEGIES

The following policies and strategies, representing the six principles described above, are separated into four interrelated categories: Land Use and Environmental Sustainability, Finance, System Maintenance and Operations, and System Expansion. The policies and strategies are numbered for reference purposes only. The order of the policies does not indicate any level of significance or ranking.

### LAND USE AND ENVIRONMENTAL SUSTAINABILITY POLICIES AND STRATEGIES

This MTP has been custom designed to match locally determined Blueprint land uses, and its investment strategy will not succeed if land development patterns unfold substantially different than the Blueprint calls for. In fact, about 75 percent of the improved performance that comes from this MTP is derived from local governments implementing Blueprint land uses. The Blueprint growth scenario leads to: more compact communities built around mixed-use community activity centers, applying to existing suburban communities, major new greenfields communities around the present urban edge, and rural communities; a better balance of jobs and housing in communities, with a variety of housing types and prices in all communities to match an evolving market; and attention to siting of commercial and industrial businesses that require significant truck traffic. This development future yields shorter commutes overall, lower VMT, lessened growth in congestion, more transit service and use, more local trips within communities for which walking, bicycling, and transit use become attractive options to driving.

In tandem with an incentive-based approach to implement Blueprint for urbanized areas, the region contemplates a study of the needs of the rural areas, including identifying areas with high natural resource values to be preserved and economic development opportunities. Blueprint, the rural initiative, and MTP together move this region significantly toward environmental sustainability by reducing air pollution and greenhouse gas emissions; conserving energy,

water, and open space; and enhancing both urban and rural economic viability. The following policies and strategies guide SACOG and local agencies.

#### **1. Policy: SACOG intends to provide information, tools, incentives and encouragement to local governments that have chosen to grow consistent with Blueprint principles.**

1.1. Strategy: Develop a form-based code handbook designed for local jurisdictions in this region.

1.2. Strategy: Invest in the Community Design Funding program, an incentive program for local governments that provides transportation funding for smart growth developments that promote walking, bicycling and transit use.

1.3. Strategy: Pursue regulatory reform at the national, state and local levels to encourage Blueprint-style growth.





1.4. Strategy: Support incentive programs that make infill development more attractive or lucrative.

1.5. Strategy: Create and invest in a rural strategy and program to improve transportation systems that affect the economic viability of rural areas located in jurisdictions that implement good growth patterns, consistent with the Blueprint Principles, the Rural-Urban Connections Strategy, or other rural initiatives.

## **2. Policy: SACOG intends to educate and provide information to policy-makers and the public about the mutually supportive relationship between smart-growth development and transportation.**

2.1. Strategy: Provide computer software and technical assistance to local governments.

2.2. Strategy: Monitor and report on the transportation and air quality impacts of development patterns and their relationship to Blueprint growth principles.

2.3. Strategy: Monitor and report on commute patterns, traffic levels and transit use compared with the projections in this MTP.

2.4. Strategy: Develop educational materials to inform local discussions, particularly in infill areas, about neighborhood traffic behavior and the effects of higher density on traffic, transit, walking and bicycling.



2.5. Strategy: During the design phase, review transportation projects to assess whether they foster transportation choices, improve local community circulation, or divide communities, and either avoid or mitigate negative impacts (including those to public health, safety, air quality and the environment).

## **3. Policy: SACOG will encourage local jurisdictions in developing community activity centers well-suited for high-capacity transit service.**

3.1. Strategy: Encourage development proposals that are well-suited and located to support high-capacity transit use.

3.2. Strategy: Identify appropriate “best practices” for complete streets, and initiate a technical assistance program to help local agencies develop street designs that are sensitive to their surroundings and context.

3.3. Strategy: Establish regional guidance for high-capacity transit station area planning.

3.4. Strategy: Support efforts by transit agencies and local governments to site and design transit centers and stations close to economic centers and neighborhoods and to expand park-and-ride facilities at a few key stations.

3.5. Strategy: Encourage local agencies to develop an interconnected system of streets, bikeways, and walkways that supports a more compact development form; avoid



building new circulation barriers; accommodate safe travel for all users; and provide connections through existing gated communities, walls and cul-de-sacs to access schools, activity centers and transit stops.

3.6. Strategy: Encourage development patterns that provide safe and efficient pedestrian and bicycle access to trunk commuter transit lines.

3.7. Strategy: Conduct a research study and perform travel modeling and air emissions analysis to identify alternatives for local governments to use to modify current parking regulations to create incentives for people to use alternative modes. Study will be conducted with local governments and air districts; findings will be presented to all related and essential parties.

**4. Policy: SACOG encourages every local jurisdiction to pursue housing in all price ranges, to meet the housing needs of the local workforce and population, and forestall pressure for long, external commuting.**

4.1. Strategy: Develop the required Regional Housing Needs Plan to guide local agencies' assessments of housing supply and price ranges.

4.2. Strategy: Encourage adequate supply of housing at a variety of price ranges in the region, to prevent the export of housing to adjacent regions.

**5. Policy: SACOG should seek to develop and inform local governments and businesses about a regional strategy for siting industry and warehousing that need good freight access.**

5.1. Strategy: Work to identify and preserve land uses to meet goods movement needs of local customers.

5.2. Strategy: Study and consider the need for land for suppliers, distributors, and other businesses with a regional clientele that may prefer to be near the center of the region with good freeway access, but do not need high-cost center-city sites.

5.3. Strategy: Study and consider the needs of the agricultural industry for refrigeration and consolidation units, warehousing, processing plants and other facilities near transportation access.

**6. Policy: SACOG encourages local governments to direct greenfield developments to areas immediately adjacent to the existing urban edge through the provision of information, incentives and pursuit of regulatory reform for cities and counties.**

6.1. Strategy: Minimize the urban growth footprint of the region by improving interior circulation and access instead of access to and beyond the urban edge.

6.2. Strategy: Provide incentives and invest in alternative modes to serve infill and more compact development.

6.3. Strategy: Consider funding to acquire conservation easements accompanying specific regional connector road projects, to protect land from development in areas that are not intended or zoned for development.

6.4. Strategy: Continue to pursue regulatory reform at the state and national levels to remove barriers to environmentally sensitive developments, when appropriate, at the edges of existing urbanization.





**7. Policy: SACOG intends to develop a Rural-Urban Connection Strategy (RUCS) for ensuring good urban-rural connections and promoting the economic viability of rural lands while also protecting open space resources to expand and support the implementation of the Blueprint growth strategy and the MTP.**

7.1. Strategy: Use research, data and modeling to inform a public participation process to conceptualize approaches to sustainable rural land use policies encompassing at a minimum, issues such as agricultural practices (including energy production), natural resource protection, rural development practices (including methods to encourage job-housing balances) and infrastructure needs.

7.2. Strategy: Ensure consistency between the RUCS and local Habitat Conservation Plans and Natural Communities Conservation Plans.

7.3. Strategy: Ensure that the RUCS is coordinated with the Blueprint and MTP to support each of these planning efforts individually, as well as collectively.

7.4. Strategy: Conduct analysis on how various rural land use strategies affect vehicle miles of travel and air emissions, as well as rural economic viability and environmental sustainability.

7.5. Strategy: Develop sustainable rural land use policies through a public process that encompass, at a minimum, issues such as agricultural economic development (including energy production), natural resources protection and agricultural land conservation, rural

development (including job-housing balances), and infrastructure needs.

7.6. Strategy: Invest in transportation projects that help implement the RUCS recommendations. Investment recommendations may include agritourism, goods movement and funding rural road improvements between cities when the county implements growth patterns consistent with Blueprint.

**8. Policy: SACOG intends to support and invest in strategies to reduce vehicle emissions that can be shown as cost effective to help attain and maintain clean air and better public health.**

8.1. Strategy: Continue and increase the region's previous commitment to TDM program as strategy for education and promotion of alternative travel modes for all types of trips toward reducing vehicle miles traveled (VMT) by 10 percent.

8.2. Strategy: Continue and increase the region's previous commitment to funding the Sacramento Emergency Clean Air and Transportation (SECAT) program.

8.3. Strategy: Set aside funding for the annual Spare the Air campaign, a summer program operated by the Sacramento Metropolitan Air Quality Management District that informs the public about days when the ozone danger is high and encourages the public to use non-polluting alternatives to driving.

8.4. Strategy: Help air districts and local agencies study localized air pollution impacts on health and the environment, including air toxins, by providing analysis and information from SACOG's planning work. Support public information efforts to raise awareness on these connections.

**9. Policy: SACOG intends to use the best information available to implement strategies and projects that lead to reduced greenhouse gas (GHG) emissions.**

9.1. Strategy: Adopt a transportation pricing policy, adopt a Safe Routes to School policy and implement a pilot program, expand public access to travel information through the 511 program, and adopt a "Complete Streets" policy.



9.2. Strategy: Comply with the Federal Clean Air Act by recommending selected MTP2035 projects as draft transportation control measures to help reduce GHG emissions and identify transportation emission control measures.

9.3. Strategy: Create an alternative fuel vehicle and infrastructure toolkit for local governments, create a public education program on individual transportation behavior and climate change, and create a regional open space strategy.

9.4. Strategy: Develop a regional climate change action plan, and develop and implement a construction energy conservation plan.

9.5. Strategy: Enhance I-PLACE<sup>3</sup>S model to assess greenhouse gas impacts.

**10. Policy: SACOG should consider strategies to green the system, such as quieter pavements, cleaner vehicles, and lower energy equipment, where cost effective, and consider regional funding contributions to help cover the incremental cost.**

10.1. Strategy: Examine public policy seeking to reduce the cost of or influence the trade-offs between operating efficiency and environmental impact.



10.2. Strategy: Encourage and make available a choice of efficient modes to move freight.

10.3. Strategy: Promote early investment in 2007-compliant diesel engines.

10.4. Strategy: Support equipment retrofits under the Carl Moyer program.

10.5. Strategy: Expand use of natural gas or hybrid delivery vehicles and handling equipment.

10.6. Strategy: Increase recycling of materials, such as tires and lubricants, and improve handling of wastewater and chemical residues.

10.7. Strategy: Explore and publicize energy conservation at freight terminals.

10.8. Strategy: Encourage goods movement driver training programs that encourage fuel conservation, trip reductions and safety.

**FINANCE POLICIES AND STRATEGIES**

Transportation programs, like many other areas of public policy, face shortfalls of funding compared to needs and growth. Transportation agencies must find ways to keep existing facilities in a state of good repair, continue operation of current services, and expand to deal with population and economic growth. However, with funding for road maintenance and rehabilitation falling 30 percent short of present need, and transit service capped by available operating funds in a region where fares typically cover about 20 percent of operating costs, new funding sources must be found to meet







basic responsibilities to keep the system functioning. The region seeks funding sources that are stable, flexible and adjustable, and local option funding powers are preferable to new revenues under state or federal program control.

Federal and state funds that SACOG controls are mainly intended for capital expansion. SACOG intends to use its funds for regional-scale projects and related regional priorities; these projects have proven hard to fund locally, even under the present program structure whereby about 60 percent of funding to expand the system comes from local development-based sources. SACOG also intends to seek federal and state discretionary funding, targeted to projects well-tailored for the particular program, since any extra funds that can be obtained reduce overall program need and allow redeployment of local and regional funds.

To get the most out of existing funding, all agencies should pursue operational and other efficiencies, using methods that include consideration of private funding opportunities and pricing, and cooperate to manage and use existing funds efficiently. The following policies and strategies guide financial management and priorities for SACOG and local agencies.

**11. Policy: SACOG intends to pursue and support enactment of sustainable funding sources adequate for maintenance and rehabilitation of highways, streets and roads, and operations and maintenance of transit services.**

11.1. Strategy: Continue to pursue new and reformed transportation funding methods and sources to implement MTP2035 that are stable, predictable, flexible, adjustable and adequate in the whole to operate and expand the system.

11.2. Strategy: Strive to simplify and add flexibility to the overall funding structure when putting new financing tools or changes to the financing structure into place.

11.3. Strategy: Promote competition in the delivery of services, to foster greater efficiency, innovation and diversity of options, including consideration of revised public agency arrangements, public-private partnerships or contracting out.

**12. Policy: SACOG should support authority for local option funding sources to allow local areas to customize transportation funding and investment for maintenance and operation of the existing system and expansion to meet future needs.**

12.1. Strategy: Seek authority to set up funding sources for transit operations and road maintenance that can be controlled and adjusted at the local level, so that local agencies can consider using them when needed to support and continue existing transit services and keep the existing road system in a state of good repair.



12.2. Strategy: Seek funding sources that are indexed to growth and inflation to pay for basic maintenance and operations.

12.3. Strategy: Support the Sacramento Transportation Authority's intent to pursue a supplemental transportation funding program equivalent in revenue to a one-half percent countywide sales tax. This revenue would be expended approximately equally for enhanced public transit and local street and road maintenance in Sacramento County and take effect no later than 2012.

**13. Policy: SACOG invests federal and state funds that come to SACOG to achieve regional policies and priorities, as described in more detail in the sections that follow.**

13.1. Strategy: Seek adequate funding so local agencies can maintain and rehabilitate streets and roads to a good state of repair into the future, encompassing more adequate state funding and local option funding authority to preserve regional funding for improvement and expansion of the trunk highway and road system.

13.2. Strategy: Support new or increased funding resources for local agencies to enable operation of existing and expanded transit services, including maintenance and replacement of equipment and facilities including local-option funding sources adequate to preserve regional funding for service expansion.

13.3. Strategy: Encourage cities and counties to collect development-based fees or funding sufficient for both local road improvements and regional-scale road and transit improvements, since SACOG's regional funding can meet only 25-30 percent of regional project costs in this MTP, so that regional-scale improvements can be built in a timely way; offer technical or coordination assistance from SACOG as needed.

13.4. Strategy: Encourage local agencies to fund local arterial access and traffic capacity projects with local development-based fees supplemented with other local funds as appropriate.

13.5. Strategy: Study, coordinate discussions, and explore options for establishing a region-wide program dedicated to funding the growing need for roadway improvements and reconstruction and mitigation of community impacts on designated arterial truck routes and arterial roads that large trucks commonly use.

**14. Policy: SACOG should look for specialized funding programs at the state or federal level, and work with local agencies to bring in such funds to start innovative projects or advance specific projects that are well-matched to program goals.**

14.1. Strategy: Keep apprised of federal and state program funding cycles and specific funding opportunities, advise local agencies about them in a timely way, and help to zero in on projects that fit program requirements particularly well and are far enough along in delivery to maximize chances for success at bringing federal or state discretionary funds into the region.

14.2. Strategy: Help coordinate multi-agency packages of projects for federal and state discretionary programs and grants, where a regional strategy seems likely to improve the chances of success.

14.3. Strategy: Fund some project development specifically to create a list of key hard-to-implement projects ready for ad hoc funding opportunities.

14.4. Strategy: Help local agencies get funding from specific safety programs for safety and security improvements.





**15. Policy: SACOG should seek to manage state and federal funding that comes into the region so as to simplify and expedite project delivery, including working out ways to exchange various types of funds among local agencies and projects.**

15.1. Strategy: Seek to pool funds and programs wherever reasonable and feasible, to increase flexibility in the use of funds and delivery of projects.

15.2. Strategy: Use available funding to ensure timely construction of currently delivered projects, to the greatest reasonable extent, and substitute future funding commitments onto projects that will be delivered in the future.

15.3. Strategy: Seek to concentrate federal funds on a limited number of projects that must be federalized, so that many other projects can avoid federal requirements and processes.



15.4. Strategy: Support judicious use of bonding and other financial tools to enable earlier construction of projects, and consider use of regional funds to supplement or enhance revenue bonding tools when appropriate.

**16. Policy: SACOG should study ways to use pricing more effectively in funding of transportation.**

16.1. Strategy: Study ways that parking pricing can help achieve objectives of this MTP, including garages to support more intense land uses; revenue for alternative modes and surcharges for policy purposes; and encouragement of walking, bicycling, transit use and carpooling.

16.2. Strategy: Consider seeking a federal Value Pricing Pilot Program grant from the Federal Highway Administration to examine road and auto pricing options, such as high-occupancy toll lanes or bridges, pay-at-the-pump auto insurance, or auto loans, at an appropriate opportunity.

## **SYSTEM MAINTENANCE AND OPERATIONS POLICIES AND STRATEGIES**

Transportation agencies should keep existing facilities in a state of good repair and continue operation of current services as a higher priority than system expansion. This responsibility falls primarily to local agencies, since federal and state funds that come to SACOG are mostly limited to capital purposes. Traffic operations improvements can squeeze more efficiency out of the existing road system. The region could benefit from attention to more efficient truck movement and delivery, which has been growing faster than other traffic and spreading into suburban areas.

The transit system, comprised of a complex mix of services and agencies, can gain efficiency from better coordination of diverse services, better service features, and greater ridership. The current system focuses on lifeline service to transit dependents and low-income and minority areas; much of the potential for more effective transit service must come from services tailored to attracting riders that otherwise could drive in addition to preserving services for the transit dependent. Transportation demand manage-





ment ties this all together, by helping people find ways to travel besides by driving. The following policies and strategies express regional expectations about maintenance and operation of the existing transportation system.

**17. Policy: SACOG acknowledges and supports preservation of the existing road and highway system as the top priority for local public works agencies and Caltrans, and expects to help them secure adequate funding sources for the necessary work.**

17.1. Strategy: Encourage and support Caltrans in seeking traffic management and safety improvements along with highway rehabilitation projects from the State Highway Operations and Protection Program. Ensure that both urban and rural needs are targeted.

17.2. Strategy: Consider public-private partnerships and competitive service contracts for maintenance and operations, for a more efficient system.

17.3. Strategy: Expect local agencies to examine and consider traffic operational strategies and investments as temporary improvements to buy time or develop lower-cost ultimate alternatives for capital projects for road expansion, with SACOG to consider such projects as high priorities for regional funding.

**18. Policy: SACOG supports the development and implementation of corridor system management plans (CSMP) as a method of integrating transportation system operational management and regional planning so as to maximize system efficiency and effectiveness.**

18.1. Strategy: Participate in the development and implementation of corridor system management plans for the following corridors:

- I-80: State Route 113 to Sierra College Boulevard
- U.S. 50: I-80 to Camino
- State Route 99: San Joaquin County Line to U.S. 50, I-5 to State Route 20
- I-5: Hood-Franklin Road to Metro Airport
- State Route 65: I-80 to State Route 70

18.2. Strategy: Encourage all stakeholders to actively participate in the development and implementation of each CSMP.

18.3. Strategy: Coordinate SACOG transportation modeling and data collection activities with the travel forecasting and analysis activities associated with each CSMP.





**19. Policy: SACOG intends to ensure coordination among all forms of existing and expanded transit services, including those provided by social services agencies, for a more effective system.**

19.1. Strategy: Use timely updates of short-range transit plans, the regional human services transportation coordination plan, and periodic performance audits to provide guidance on priorities and estimates of funding needs and shortfalls.

19.2. Strategy: Seek a more seamless trip through better traveler information for trip planning, reliable schedules, coordination between operators for transfers, service changes, complementary services, a universal fare card and information available at transit stops.

**20. Policy: SACOG should work with transit operators to pursue improvements to transit access, security, comfort, schedules and information whenever opportunities arise.**

20.1. Strategy: Increase public perception of the value, benefits and use of transit and rideshare services, via activities such as image and product-specific advertising, promotion of new and restructured services, the regional emergency ride home program, outreach for special events, and education for those unfamiliar with how to use transit effectively.

20.2. Strategy: Seek to improve transit access via safe and pleasant sidewalks and walkways around transit stops, accessibility for the disabled, on-board

bike racks, better signs for transit access, shelters, improved transfer points and secure park-and-ride locations.

20.3. Strategy: Improve transit and supplemental transportation services for medical appointments, including escort services at medical offices for patients needing extra assistance, priority parking for dial-a-ride and social service transit vehicles.

20.4. Strategy: Take steps to improve safety and security at crosswalks, transit stops, and along main access route to transit, with higher priority for low-income, minority, and high-crime areas.

20.5. Strategy: Improve connections among all forms of transit service by seeking better coordinated schedules among operators, more convenient and comfortable transfer locations, notice and coordination of schedule changes, next-bus signs at high-use stops, and better trip-planning tools and public communication.

**21. Policy: SACOG should develop guidelines for rural transit services, as a lifeline for non-drivers and park-and-ride service for commuters.**

21.1. Strategy: Preserve existing rural transit and para-transit service levels, but examine them periodically to ensure effectiveness for transit-dependent residents.

21.2. Strategy: Consider specialty transit services for agricultural areas seasonally, and for tourist attractions and events.





**22. Policy: SACOG, in partnership with community and employer organizations, intends to support proactive and innovative transportation demand management programs covering all parts of the urbanized area, to offer a variety of choices to driving alone.**

22.1. Strategy: Expand transportation management organizations and outreach partners to provide education and advocacy programs across the region's six-county area, with broader focus on alternative travel choices for all trip types.

22.2. Strategy: Assist transportation management organizations to broaden and update rideshare databases offer incentives for taking alternative modes or telecommuting, offer specialty services such as vanpooling, carsharing, or subscription bus where feasible, expand promotional campaigns, and reach out to the public with personalized alternative trip planning and instant ridematching.

**23. Policy: SACOG expects operators to plan for service to transit-dependent populations—disabled, low-income, seniors, youth—within a context of service to attract riders who now drive.**

23.1. Strategy: Improve transit services and options for people with physical, cognitive and mental health disabilities, by ensuring all vehicles and facilities are safe and accessible, access routes to transit stops are safe and accessible where feasible, drivers are trained about regulations and good practices, and transfers are convenient and usable.

23.2. Strategy: Prepare for a large increase in the senior population by using universal design features, such as low-floor vehicles, automatic doorways, flatter walkways and curb ramps, and handrails, to enable seniors to safely use regular transit services and preserve limited paratransit resources for those who cannot travel without direct assistance.

**24. Policy: SACOG intends to strive to ensure community outreach to low-income and minority communities whose needs and concerns otherwise might be overlooked.**



24.1. Strategy: Ensure transportation system improvements provide equitable and adequate access by road and transit to low-income and minority communities.

24.2. Strategy: Ensure that projects to serve those communities with greater transit needs get explicitly considered in the MTP and when programming funds, pursue specific federal or state funding grants available for this purpose, and seek better coordination of all types of transit services and connections for these communities.

24.3. Strategy: Examine commute pattern travel needs of those in job placement programs, such as CalWORKs, and reverse commute flows as a guide to transit and supplemental travel service improvements.







24.4. Strategy: Seek to deploy supplemental transportation options, including shared-ride arrangements, volunteer drivers, taxi vouchers, community travel companions, cost- and fare-sharing, and mobility training on transit, bicycle and pedestrian options, to complement regular and social service transit services.

24.5. Strategy: Ensure thorough examination, context-sensitive design, and mitigation of transportation system impacts wherever feasible, particularly localized air quality and noise impacts, when building improvements through or near low-income and minority communities, which are often found adjacent to freeway and railroad corridors.

**25. Policy: SACOG should study, consult with, and help coordinate local agency activities to provide for smoother movement of trucks through and throughout the region.**

25.1. Strategy: Improve SACOG's regional freight forecasting tools, including a periodically updated commodity-flow survey that includes both consumer goods and agricultural products, an upgraded economic model, shipping and trucking industry contacts to spot and verify trends, ability to estimate up or down from limited data points, and annual truck counts at key locations.

25.2. Strategy: Maintain a goods movement advisory group to share information about evolving freight patterns, technologies and shipping needs, and identify, examine and coordinate government policies, activities and improvement projects that can make goods movement more efficient and reduce impacts in both urban and rural areas.

25.3. Strategy: Collect sound information about urban and rural impacts of the logistics industry and the customers it serves, pertaining to infrastructure demands and safety, emissions, noise and traffic impacts from trucks, and review the implications for nearby and downstream communities when local agencies consider permits for commercial and industrial businesses that involve significant amounts of truck traffic.

25.4. Strategy: Identify and reconsider regulatory and institutional barriers that hamper efficient travel patterns for trucks, identify an adequate number of preferred truck routes for efficient truck access into and across jurisdictions within the region, and actively seek solutions to accommodate truck access and traffic with community concerns on all main arterial routes.

25.5. Strategy: Consider adding or changing features of projects to facilitate truck travel.

25.6. Strategy: Identify and consider projects that could expand the market for shipping freight by rail or merchant ship, to offer an alternative for trucking for more kinds of freight shipments, such as a deeper port channel, rail intermodal transfer points, and better truck intermodal connections for "last mile" delivery.



**26. Policy: SACOG intends to preserve some capacity on major freeways within the region for freight and other interregional traffic by providing additional capacity for local and regional traffic on major arterials running parallel to the major freeways. The complementary arterial and freeway expansions are intended to better separate local and interregional traffic, but no lane restrictions (e.g., truck-only lanes) to the freeways are proposed. Under current state program structure, SACOG expects to carry the main responsibility, shared with Caltrans, to fund interregional projects at the edge of the region when growing demand for traffic to, from, and through the region warrants expansion of interregional routes.**

26.1. Strategy: Seek to coordinate regional truck routes for large trucks, and expect local agencies to include truck access policy and strategies in mixed-use and large commercial or industrial developments.

26.2. Strategy: Support rail and highway investments that route freight around, not through, the region.

26.3. Strategy: Open up interregional highway capacity only when goods movement and non-commute traffic warrants it. Evidence of this need can also occur when local roadways bear the burden of goods movement diverted from congested highways.



## SYSTEM EXPANSION POLICIES AND STRATEGIES

With the region expecting significant growth in population by 2035, it must expand the system commensurately. With neither funding nor political will to expand the system at the same rate as the projected population growth, road and transit expansion must be carefully targeted to achieve the region's growth and quality-of-life objectives. This MTP would triple transit service, tailored to surrounding land uses, to bring in riders who now drive, and more fare revenues to support operation of the larger system needed to do that.

Complete streets, designed for walking, bicycling and transit as well as autos, can offer good alternatives to driving locally, and reduce the need for overall road expansion. Regardless, roads must also be expanded strategically, to provide good access for infill development, support bus transit, and confine congestion to peak commute hours (a standard condition for robust urban economies nationwide). This region is unlikely to support significant freeway widening or new freeways, so it must conserve a portion of existing freeway capacity for trucking and interregional travel by providing alternatives for regional and local travel. The following policies and strategies lay out SACOG's investment priorities for regional funds—to support regional programs, regional-scale system expansion, compact urban land uses, and equitable expenditures over time—and guide decisions about system expansion.





**27. Policy: Support road and transit expansion investments that are supportive of 2035 MTP land-use patterns.**

27.1. Strategy: Focus on ensuring the arterial system performs well for the increased number of local trips, to support infill and compact development from smarter land uses without pushing it outward because of overly congested conditions, providing a strong grid network (which offers alternative routes) wherever land uses and other barriers allow.

27.2. Strategy: Support corridor mobility investments along major arterials that serve multiple modes of travel, through combining road capacity improvements with operational improvements to support smart growth. Supportive investments include enhancements for high-capacity transit, technology deployment and safer intersections.



**28. Policy: Prioritize transit investments that result in an effective transit system that serves both transit-dependent and choice riders.**

28.1. Strategy: Transit expansion should be targeted at land use patterns that will generate transit ridership and improve the cost recovery rates for transit service.

28.2. Strategy: Pursue transit expansion using a wide spectrum of services; each best suited to particular travel markets, considering but not limited to light rail, streetcar, express bus, bus rapid transit, local service bus, neighborhood shuttle bus, dial-a-ride, assisted paratransit for the disabled, subscription bus and jitney.

28.3. Strategy: Consider the full life-cycle cost of transit options covering both equipment and operations, the relative value of broader area coverage versus high capacity for a limited corridor, and more routes versus higher frequency, for each situation.

28.4. Strategy: Develop trunk transit corridors between communities, and local transit circulation within communities, to attract riders both for commuting and local activities.

28.5. Strategy: Develop local transit services that serve local travel patterns and connect with high-capacity trunk transit lines with timed transfers.

28.6. Strategy: Design commute transit as a door-to-door system, with full or limited express routes, short waits at transfers, and walk access or good distribution at each end.

28.7. Strategy: Develop a bus and carpool lane system for key commuter corridors and expand transit service to use it.

28.8. Strategy: Address commute congestion with transit first/carpool second strategies for downtown Sacramento, and carpool first/transit second strategies for suburban job centers until employment density indicates a shift, to switch drivers into empty seats in both transit and autos.





28.9. Strategy: Seek to build good bus transit service with heavy, established ridership as a precursor to investment in rail transit, to ensure return on the high capital investment for rail.

28.10. Strategy: Factor in the benefit of rail transit as a permanent investment, with stronger ability to attract transit-oriented development patterns around it, where local smart growth planning and the real estate market already promise development dense enough to support rail investment.

28.11. Strategy: When a transit route or service fills to capacity, examine complementary service of another type as an alternative simply to adding capacity to the route that is full.

28.12. Strategy: When planning high-capacity transit corridors, consider expanding support facilities, such as access sidewalks and walkways, passenger shelters, transfer stations, next-bus notification signs, signal preemption and park-and-ride lots, as part of development along the route.

**29. Policy: SACOG encourages locally determined developments consistent with Blueprint principles and local circulation plans to be designed with pedestrian, bicycle and transit as primary transportation considerations.**

29.1. Strategy: Implement the Regional Bicycle, Pedestrian and Trails Master Plan, going after 126 high priority improvements first.

29.2. Strategy: Invest in safe bicycle and pedestrian routes that improve connectivity and access to common destinations, such as connections between residential areas and schools, work sites, neighborhood shopping, and transit stops and stations. Also invest in routes to and around schools so trips can be made by bicycling or walking.





29.3. Strategy: Invest toward the eventual creation of a regional bicycle and pedestrian network, connecting first those communities that already have good local circulation networks in place.

29.4. Strategy: Coordinate information sharing between jurisdictions, to ensure connected routes, sharing of effective ideas, and more complete public information.

**30. Policy: SACOG also gives primary priority to selective road expansion, to support infill development and forestall midday congestion.**

30.1. Strategy: Pursue strategic road expansion that improves congestion and supports effective transit services.

30.2. Strategy: Expect that feasibility and corridor studies, project study reports and environmental studies will consider high-capacity transit investments when examining how to provide additional capacity on main highway or bridge corridors.

30.3. Strategy: Pursue strategic road expansion that reduces congestion on access routes to areas with significant infill development.

30.4. Strategy: Give priority for roadway and intersection expansion to routes where midday demand approaches existing capacity or excessive peak-period demand threatens to spill over into midday, so no part of the system fails to function continuously for much of the day.

30.5. Strategy: Support expansion of trunk arterials that provide access to job centers and freeway interchanges to provide enough capacity to forestall traffic diversion through neighborhood streets.

30.6. Strategy: Provide technical guidance to local agencies and invest regional funds to build complete streets projects through designated and planned community activity centers, to ensure bicycles, pedestrians and transit can share the road safely and compatibly with autos.

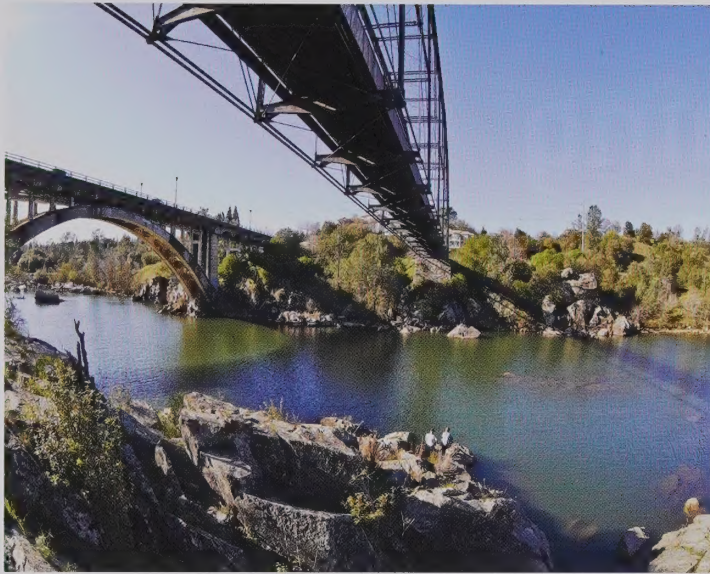
**31. Policy: SACOG intends to invest funds that are at SACOG's discretion, as long as the existing funding and program structure remains essentially as it is today, following these policy guidelines:**

31.1. Strategy: Continue to use funds coming through SACOG to fund regional objectives for air quality, community design, transportation demand management, and bicycle and pedestrian programs. The funding level should be proportionally at least as great as programming levels since the regional programs began in 2003.

31.2. Strategy: Continue to help fund regional-scale investments that include local projects, with the priorities identified below. The funding level should be consistent proportionally with programming levels since the regional programs began in 2003.







- Main state highways and key trunk arterials that access them, including bus and carpool lanes; rail and bus transit running with 15 minutes or shorter peak frequency, also including express commuter services; traffic operations strategies; crossings of rivers and other barriers; and complete streets in community activity centers; completion of freeway segments (or gap closure) including freeway-to-freeway connectors;
- Other key arterial connections, transit dependent services, interchange capacity, transit walk access, bike and sidewalk connections, and port, airport and rail access;
- Other major arterials, other transit services, improvements to designated freight routes, jurisdictional equity, and retrofit programs;
- Invest in all three priorities over the life of the plan, considering funding levels available, delivery of projects, and opportunities for funding leverage; and
- While investing regional funds for regional objectives, set aside a small proportional share of available money for equity (using local priorities) and secondary goals (such as a retrofit program).

31.3. Strategy: Equity funding to allow local agencies to fund road maintenance and rehabilitation or safety projects with regional funds in lieu of a capacity project:

- Expect to maintain approximate equity among cities and counties, and within counties, across several funding and program cycles;
- Evaluate the benefits of the project to the population the project serves as well as the population of the submitting jurisdiction; and
- Equity is primarily determined by identifying the difference between funds received from SACOG and those that would be realized by a formula. Consideration should also include the difference between funds received from all state and federal sources (not just those funds distributed by SACOG) and those that would be realized by formula.





C H A P T E R 6

# The Planning Process



NEARLY 8,000

INDIVIDUALS

CONTRIBUTED TO

THE MTP THROUGH

WORKSHOPS, MEETINGS

AND PUBLIC OPINION

RESEARCH. OVER A

TWO-YEAR PROCESS,

SACOG AND THE MTP

PARTNERS ENGAGED

THE PUBLIC IN EVERY

PHASE.



SACOG is the Metropolitan Planning Organization responsible for developing the federally required MTP every four years in coordination with Sacramento, Yolo, Yuba, Sutter, El Dorado and Placer counties (excluding the Tahoe Basin), and the 22 cities within. The plan incorporates county-wide planning developed by the Placer County Transportation Planning Agency and the El Dorado County Transportation Commission, under Memoranda of Understanding between those agencies and SACOG.

This planning area, shown in Figure 6-1, is designated a federal non-attainment area for ozone, meaning that for the region to be eligible to receive federal transportation funds, the region's transportation system must be able to show a steady decrease in pollution emissions until the area's air is clean enough to meet air quality standards.

**Transportation systems are best planned at a regional level because people don't confine their trips to a local area.** Federal law established regional agencies for the purpose of area-wide transportation planning in the 1970s, so that planning for highways, roads and public transit would be comprehensive and cooperative between local agencies.

For this region, a long-range regional transportation plan is required to cover at least a 20-year planning horizon, and it must be updated every four years under federal transportation law. This current update is called the Metropolitan Transportation Plan (MTP) 2035 and covers 28 years, from 2008 to 2035. The Plan provides the regional vision for surface transportation, within the constraints of funding that the region can reasonably expect to receive.

If a city, county or public agency in the region wants to use federal or state transportation funding for projects or programs, the projects must be contained in, or be consistent with, this Metropolitan Transportation Plan. Prepared collaboratively with transit service providers, air quality management districts, transportation departments, planning agencies and community organizations in the region, the MTP2035 represents transportation improvements for the near and long term.

## HOW WAS THIS PLAN CREATED AND WHO WAS INVOLVED?

**The SACOG Board of Directors, in its policy role overseeing long-range transportation planning in the region, is ultimately responsible for this plan.**

The Board considered recommendations from SACOG committees, SACOG staff, local agencies and the public, and actively deliberated on the plan during its stages of development. The process also included active involvement of the MTP Partners committee that was instrumental in the plan's comprehensive public involvement program. MTP Partners included the directors from the El Dorado County Transportation Commission, Placer County Transportation Planning Authority, Sacramento Metropolitan Air Quality Management District, Sacramento Regional Transit District, Sacramento Transportation Authority, Valley Vision and the Yolo County Transportation District. All regional public works agencies and transit operators were also invited to participate in the technical screening process that was based on ongoing Congestion Management Process (CMP) activities.

**SACOG has developed a Public Participation Plan (PPP) as a guide to meeting federal and state requirements for public involvement.** The PPP is intended to provide direction for public involvement activities to be conducted by SACOG and contains the procedures, strategies and techniques used by SACOG for public involvement. Section Three, Native American Indian Tribal Government Input, outlines the principles guide for SACOG's work with







Native American Indian governments as well as recommended strategies for gathering input. The full PPP is located in Appendix E2.

## PUBLIC INVOLVEMENT

Developing an effective regional transportation system requires understanding the needs of our region's residents and the travel choices they will want and need to make. **SACOG developed this MTP with a robust public involvement process including more than 150 presentations, 17 community workshops, and an Elected Officials Summit between the fall of 2005 and spring of 2006.** In all of the community workshops, participants had the opportunity to work in diverse table groups in mapping activities to identify their priority investments. For specific information related to the spring community workshops, see Appendix E3 *MTP Dialogue Begins: Community Involvement Phases I and II*.

Public input from these workshops was used by SACOG staff to develop alternative investment packages for further public input. **On November 16, 2006, SACOG presented TALL Order: Moving the Region Forward, eight simultaneous community workshops bringing together 1,725 people by video conferencing to discuss what transportation options the region will need over the next 28 years.** Participants were provided maps of nine transportation corridors and performance information from computer modeling associated with specific transportation investment packages. The performance indicators included vehicle miles traveled in congestion per household, vehicle miles traveled per household, vehicle hours of travel per household, and percentage of trips driving alone, carpooling, walking, bicycling, and using transit, as well as the growth in walking, bicycling and transit trips by 2035.

**SACOG also conducted significant public attitude research for the MTP for 2035.** Research included a random-sample phone survey, a random-sample online survey, a self-sampled online survey, and random-sampled focus groups. Specific focus groups were held to identify the concerns, needs and interests of the low-income and certain ethnic minority populations for the Sacramento region.

**In January 2007, SACOG joined media partner KCRA 3 in bringing transportation issues to televisions and computer screens in homes across the Sacramento region.** *Road Map to the Future* allowed viewers to learn about different transportation options being considered for the MTP. The program included the opportunity for viewers to provide input through an online KCRA poll. The program content was simple, focusing on types of transportation improvements in three broad areas: road improvements, transit improvements and quality of life improvements including bicycling and pedestrian amenities and a variety of program improvements. Over 55,000 viewers watched the program and more than 1,300 viewers responded to the online poll.

**Throughout the public workshops, public opinion research and media outreach, SACOG heard general public interest in a balanced investment package**



**including improvements in road maintenance, road expansion, transit service expansion, and amenities for bicyclists and pedestrians.**

Participants indicated priorities for investments that reflected the six MTP Principles: access and mobility, equity and choice, economic vitality, environmental quality and sustainability, financial stewardship and smart land use, with strong public support for access and mobility, and smart land use.

For complete information related to public input at the TALL Order: Moving the Region Forward forum, the Road Map to the Future televised town hall or the public opinion research, please see **Appendix E3** for *MTP Dialogue Continues: Community Involvement Phases III and IV*.

**The private sector was actively engaged in all stages of plan development and comprised a large proportion of the nearly 8,000 citizens who contributed through workshops, meetings and market research.** Nearly 1,800 citizen planners came out to 17 community workshops held throughout the region between February and June 2006. Over 75 percent of the participants responded to our demographic surveys, and 13 percent identified as being in the “Business” area of interest. An additional 150 participants participated in a shorter version of the workshop sponsored by the Business Journal. Additionally, in November, 2006, 1,725 people participated in eight simultaneous public workshops throughout the region (TALL Order: Moving the Region Forward). Participants identified their area of interest, and 63 identified themselves as Business/Agriculture and 78 identified themselves as Real Estate/Developer. More detailed information about the public workshops is available in **Appendix E3**. In addition to workshop participation, SACOG and its civic partner, Valley Vision, proactively engaged the Sacramento Metropolitan Chamber of Commerce and other business groups through meetings and presentations. A full list of groups consulted is available in **Appendix E4**.

## **TECHNICAL ANALYSIS AND CONGESTION MANAGEMENT PROCESS (CMP)**

**As part of the MTP development and ongoing CMP agency efforts, technical committees comprised of local public works agencies and transit operators made specific recommendations considered by the Board of Directors.** Input was also incorporated from SACOG advisory committees, including the Regional Planning Partnership, the Transit Coordinating Committee, the Bicycle and Pedestrian Advisory Committee and the Transportation Demand Management (TDM) Task Force.

**Collaborations between local agency partners included the development of county-scale transportation scenarios that were developed in late 2005 through the spring of 2006 for each SACOG county.** The range of investments was taken from existing plans and new proposals developed through agency collaborations. Maps and supporting data for each scenario were then prepared for a series of 17 workshops held during the first half of 2006 to gather citizen feedback on priority investments to consider. The scenarios reflected different emphases on specific investments in roads, transit, bicycle and pedestrian modes, and transportation programs.

Following this effort, **SACOG staff and agency partners combined the most popular and well-performing county investment priorities into regional scenarios.** The objective was to create distinct investment scenarios that expand travel choices and met CMP





objectives in a cost-effective manner. The regional scenarios were provided as nine corridors for consideration at the TALL Order forum in November 2006. The TALL Order scenarios offered citizen planners the chance to identify their investment priorities, while grappling with the hard choices and financial trade-offs required to plan our region's transportation future.

**Throughout the workshop period, SACOG provided results of various investment scenarios through a variety of CMP performance measurements.** These consistently reported measures included percentage of travel by mode, vehicle miles traveled per household, vehicle miles traveled per household in congestion, transit share of commute trips, and other statistics related to new miles of roads, rail transit and bus transit. The performance measurements were made available in electronic and print formats for review by the general public, agency partners and the SACOG Board of Directors.

**Increased communication between SACOG and local agencies over the course of the MTP process led to a more comprehensive project list than in previous MTPs and performance measures to track through ongoing CMP efforts.** Local agency plans were reviewed by SACOG during 2006 for the purpose of studying plan alternatives, and again in early 2007, when agencies were asked to nominate projects through a Call for Projects request for scopes, costs, and schedules as well as priorities and information on developer-



funded projects. Since the regional plan takes into account local funds—including developer fees and developer-built projects—as well as regional, state and federal funds, projects that local agencies intend were considered through multiple rounds of review. SACOG fit as many agency priorities as possible into the MTP, given the constraint of reasonably expected revenues.

Projects nominated by local agencies were then analyzed against the citizen priorities identified through the public outreach, technical performance, and financial constraint requirements. The result reflects strong performance and financial realities.

SACOG staff provided the technical analysis for the plan, prepared materials for the MTP workshops, recruited more than 250 facilitators from agency partners, met with interest groups and the public, and in the end drafted the Final Plan for the Board of Directors. The staff also provided:

**Financial forecasts of amounts and types of funds expected to be available between 2008 and 2035.** Federal statutes require that regional transportation plans be limited to improvements that can be afforded with funds “reasonably expected to be available.” Issues arising from the forecasting of and limitations on funding are discussed in detail in **Chapter 12 on Financial Stewardship and Appendix B1.**



**Information from the regional transportation model and other data sources.** SACOG's population, housing, and employment projections for the region—based on the cities' and counties' land use plans and Board-approved growth projections—along with its transportation model, allow evaluation of the impacts of changes to the transportation system. **Appendix D2** gives the assumptions that are used for land use projections. **Chapter 4** details the results of the transportation modeling performed for this plan.

## WHAT FEDERAL AND STATE REQUIREMENTS MUST BE MET?

Federal statutes require adherence to eight planning objectives in the development of regional transportation plans:

- support economic vitality of the region;
- increase the safety of the system;
- increase the security of the system;
- increase accessibility and mobility options for people and freight;
- protect and enhance the environment and quality of life;
- improve integration and connection among modes for people and freight;
- promote efficient system management and operations; and
- emphasize preservation of the existing system.

All of these federal objectives coincide with the adopted goals in the plan, and thus have been considered in defining the strategies and projects for the plan. The MTP2035 is also consistent with other plans and regulations. Detailed descriptions of the following plans and regulations are found in **Appendix E1**:

- The MTP is consistent with the transportation plans of adjacent regions, short-range transit plans, air quality plans, land use plans, airport plans, and plans for intelligent transportation systems (ITS).

- The MTP is consistent with the California Transportation Plan, a state-wide document with policies that should be followed in all regional transportation plans.

- The MTP must conform to the federal Clean Air Act, which requires demonstration that emissions from transportation activities in the plan decline steadily until a deadline by which federal clean air standards must be reached in the region (currently, by 2019).

- The MTP is consistent with the California Clean Air Act, a state regulation that specifies air quality management strategies that must be adopted.

- The MTP is consistent with California Environmental Quality Act (CEQA), through the development of an environmental impact report (EIR) that documents impacts and mitigation issues for the region.

- The MTP is consistent with the Human Services Transportation Plan (HSTP), through coordination with groups identified in **Appendix E4** and HSTP recommendations consistent with the environmental justice analysis described in **Chapter 9**.

- The MTP includes access to inter-regional transportation, such as Amtrak stations, freight railyards, airports, and the Port of Sacramento, but does not include planning for those systems, which are owned and operated by other entities. A discussion of interregional transportation is found in **Appendix C1**.





C H A P T E R 7

# Smart Land Use

SMART LAND

USE: DESIGN A

TRANSPORTATION

SYSTEM TO SUPPORT

GOOD GROWTH

PATTERNS, INCLUDING

INCREASED HOUSING

AND TRANSPORTATION

OPTIONS, FOCUSING

MORE GROWTH INWARD

AND IMPROVING THE

ECONOMIC VIABILITY

OF RURAL AREAS.





The Metropolitan Transportation Plan for 2035 has a brand new approach. In previous plans, the transportation system was designed to accommodate development planned in each city and county in isolation, as adopted in local general plans. Generally speaking, the location of existing and new jobs and housing defines the region's commute demands. Over time, the region has come to understand that regional transportation plans and local land use plans must be closely linked if we are to change our travel patterns in a beneficial way.

Urban form and transit service must be interrelated at a fundamental level: as the population of a metropolitan area grows beyond 2 million, transit and walking become more suitable in urban and suburban areas, highway congestion becomes the expected norm, driving costs increase (delay and parking), accessibility patterns change and rural areas face growth pressures.

More compact urban design and mixed land uses favor more travel choices, including transit, as the cost in dollars and congestion make driving alone less attractive and affordable. In larger and more compact urban areas, the roadway and parking space needed for autos becomes a limiting factor for auto use, because of congested conditions and cost.



## BLUEPRINT LAND USE TRANSPORTATION PLAN

**The Preferred Blueprint Scenario, adopted by the SACOG Board of Directors in December 2004 as the growth vision for 2050 that will be individually determined by cities and counties, calls for the region to follow seven principles:**

- Provide a variety of **transportation choices**;
- Offer **housing choices** and opportunities;
- Take advantage of **compact development**;
- Use **existing assets**, such as available land within cities and historic buildings;
- **Mixed land uses**, such as housing and stores;
- Preserve open space, farmland and natural beauty through **natural resources conservation**;
- Encourage distinctive and attractive communities with **quality design**.

**Blueprint principles apply equally to infill development and to new greenfield developments around the urban edge.**

**Land use decisions are key to the success of this MTP.** The 2035 land use base for this MTP, which is largely consistent with the 2050 growth vision, supports a transportation system that reduces growth in vehicle miles traveled and traffic congestion and makes



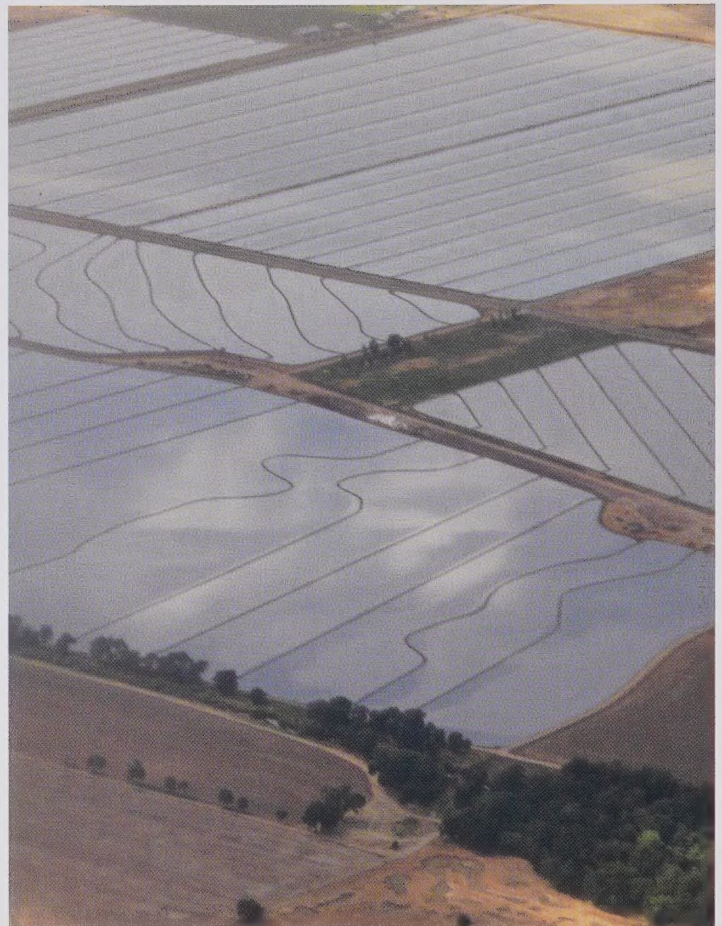


walking, bicycling and transit preferable choices for more trips. The transportation system in this plan has been custom designed to match this land use pattern, and about 75 percent of the improved performance of the system is directly due to land use, not to specific transportation projects. Thus, implementation of the locally determined Blueprint land uses is the most important part of successfully implementing this MTP. Figure 7-1 is a map of the Blueprint-consistent land use that forms the basis of this transportation plan.

### POPULATION GROWTH IN THE REGION

**Substantial residential, commercial, and industrial development is expected over the next 28 years to accommodate increases in population and growth in the economy. Between 2005 and 2035, the region is expected to add 1.2 million residents requiring 535,000 jobs and 525,000 housing units on top of the one million existing jobs and 800,000 existing housing units. This growth will require the conversion or redevelopment of considerable land areas in the region. SACOG estimates that about 140,000 acres will be converted to accommodate this planned growth. This development represents conversion of approximately 3.5 percent of the land in the Sacramento region to urban uses over the next 28 years. Besides the land converted to urban uses, currently urbanized land will be intensified with infill development.**

For the MTP2035, with the cooperation



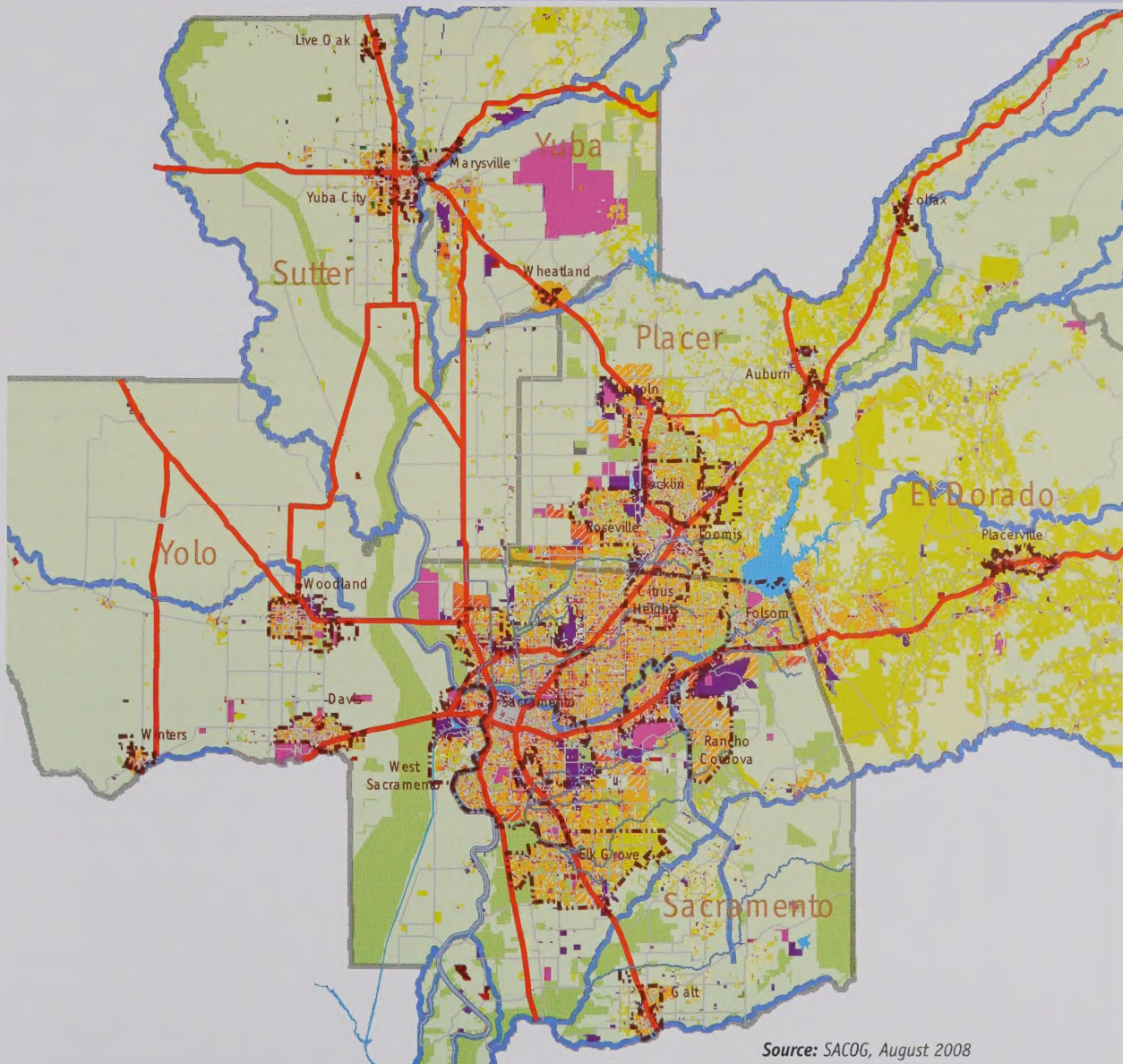
of local governments, SACOG has developed a land use base to accommodate expected growth. This land use base represents the future development pattern most likely to occur in the SACOG region, taking into account the long-term land use planning activities of local governments and market influence on development patterns.

Accordingly, significant growth will continue to occur in the region's urban core (Sacramento, eastern Yolo and southern Placer counties). In both the urban core and the rest of the region, growth will become more balanced between jobs and housing than it is today, and more focused within and contiguous to existing cities and towns. The most significant growth in population and employment is expected to occur in the community areas shown in Table 7-1.

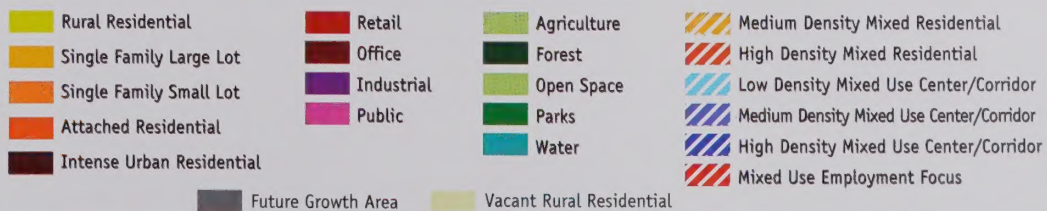


**FIGURE  
7-1**

**Land Use 2035  
in the Sacramento Region**



Source: SACOG, August 2008





**TABLE**  
**7-1**

## Five Fastest-Growing Communities<sup>1</sup>

*In the SACOG Region, 2005–2035*

| Population                   | Housing                      | Employment      |
|------------------------------|------------------------------|-----------------|
| Rancho Cordova               | Rancho Cordova               | Rancho Cordova  |
| Roseville                    | Roseville                    | Roseville       |
| Vineyard (Sacramento County) | Vineyard (Sacramento County) | North Natomas   |
| North Natomas                | North Natomas                | West Sacramento |
| Lincoln                      | Lincoln                      | Lincoln         |

<sup>1</sup>Communities in this table are defined by SACOG Regional Analysis Districts (RADs), which are geographic areas that generally correspond to individual smaller city boundaries or communities within larger jurisdictions. RADs are used to measure community-level transportation impacts.

Source: SACOG MTP2035 Population, Housing and Employment Projections, July 2008



## JOBS-HOUSING BALANCE

Three main concentrated job areas—Sacramento Central Business District/East Sacramento/West Sacramento, Rancho Cordova/Folsom/El Dorado Hills, and Roseville/Rocklin/Lincoln—contain 45 percent of all jobs today, and 48 percent of all jobs in 2035. The growth in housing/workforce is more broadly spread around the urban edge, with 70 percent of new housing in Rancho Cordova, Natomas, Folsom/El Dorado Hills, Rocklin/Lincoln, Roseville, Elk Grove, southeast Sacramento County, southwest Placer County, and southern Yuba County.

**Jobs-housing balance is important because if people have the opportunity to live and work in the same area, it will limit commute vehicle miles traveled during peak periods in areas where congestion is growing.**

Where there was previously a growing jobs-housing imbalance that led to increased long-distance travel, there is now expected to be an improved balance all around the region that should lead to significantly less driving. In 2005, 240,000 workers lived in the same community where they worked; this is expected to increase to 440,000 by 2035. The new



emphasis by many jurisdictions on creating a proximity of employment, housing, commercial and recreational land uses means that people will be able to travel more easily by public transit, walking and bicycling because distances will be shorter.

A major challenge of this principle relates to the synchronization of transportation improvements in developing areas—implementing transit service and funding its operations, fixing traffic bottlenecks, and completing bike and sidewalk connections through partially developed areas. If land use changes are made without supporting transportation infrastructure, they will not succeed in reducing the number and length of driving trips.

**If the land use base for this plan and the plan itself are implemented, travel forecasts estimate a nearly 10 percent reduction in vehicle miles traveled (VMT) per household along with a reduction in average commute distance by 2035.** More local travel will in turn

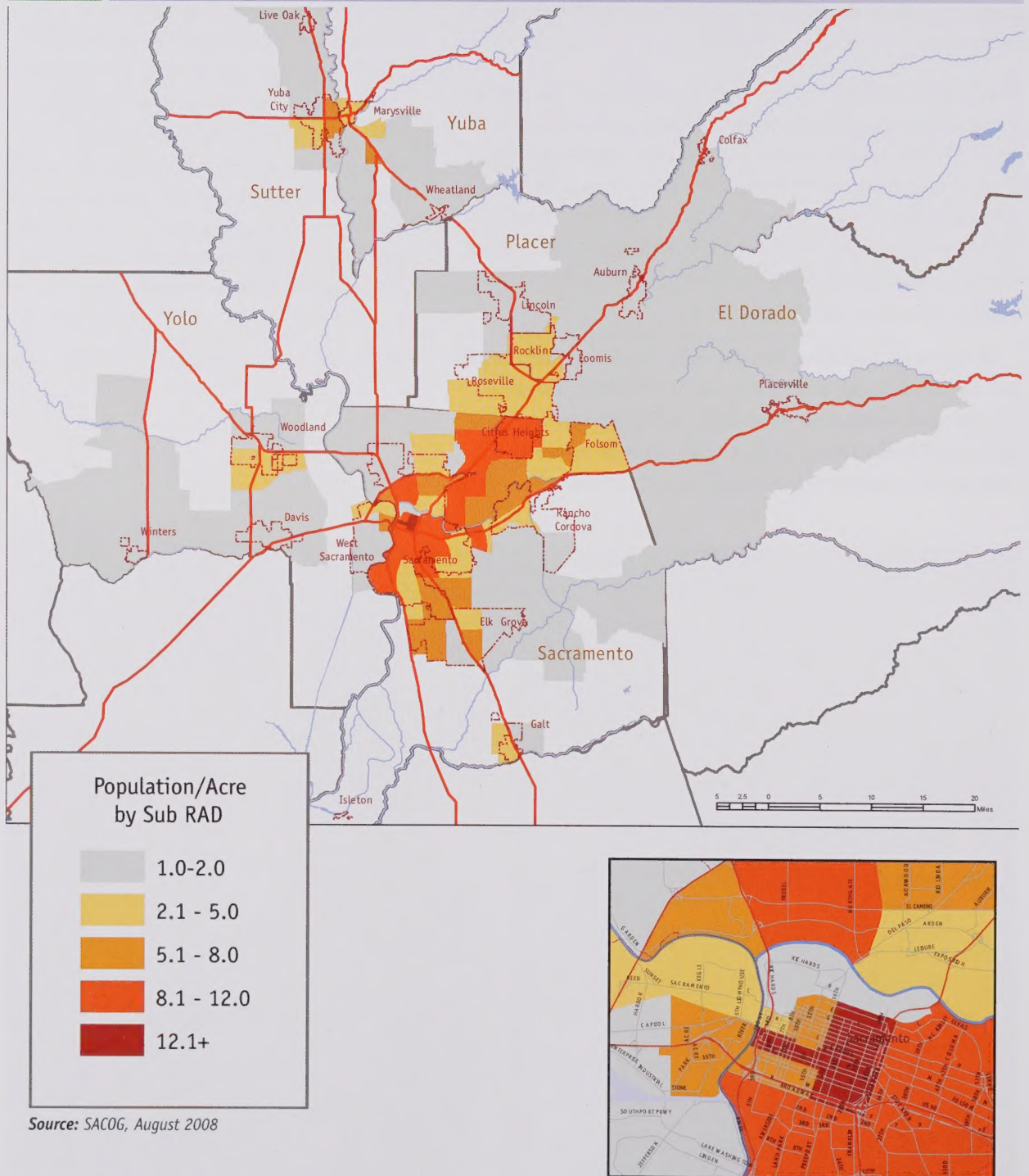
preserve some capacity on the region's freeways for the expected growth in interregional auto and truck trips. Also, the more compact and mixed land use patterns and the projects in MTP2035 hold congested travel per household in 2035 to less than a 5 percent increase above 2005 levels. In the MTP for 2025, a 58 percent increase in congested travel over 2002 was projected, more than ten times greater. **Figures 7-2, 7-3, 7-4 and 7-5** are maps of population and employment densities for 2005 and 2035.





**FIGURE**  
**7-2**

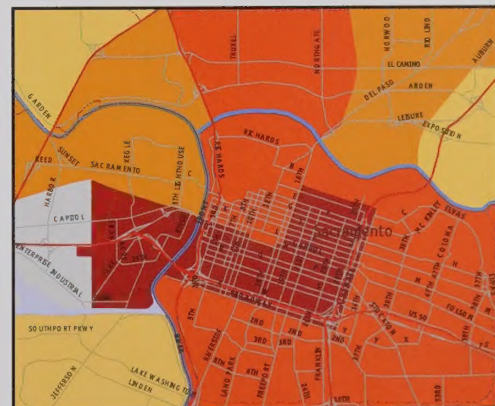
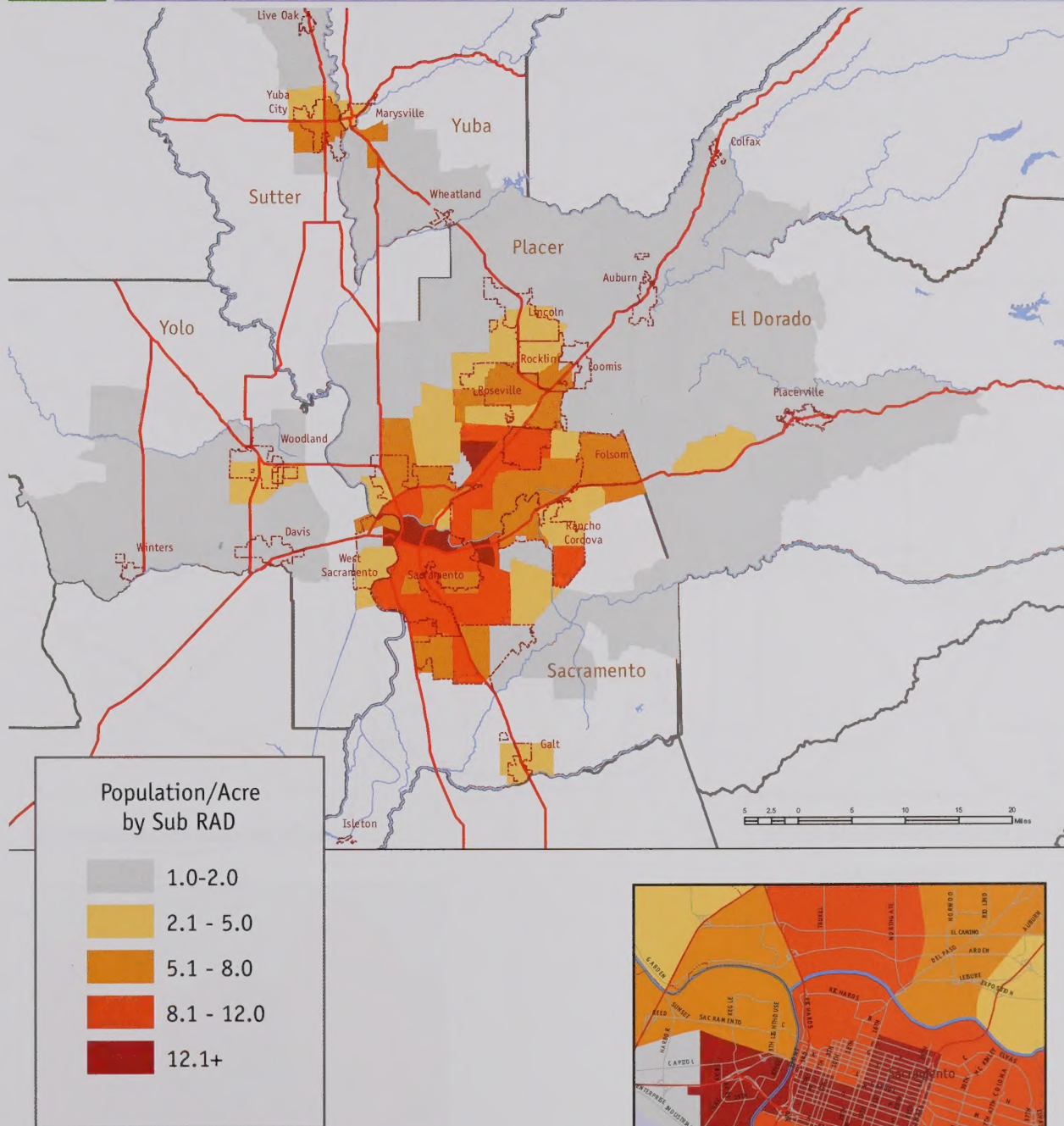
**Population Density 2005**  
*in the Sacramento Region*



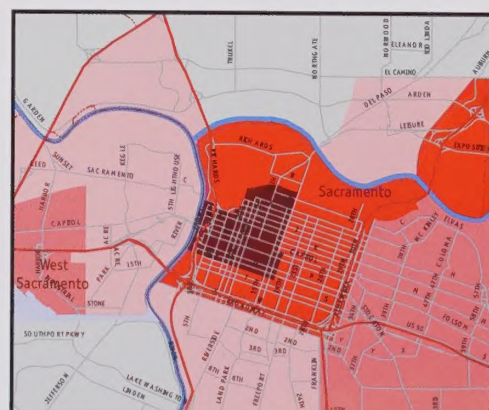


**FIGURE**  
**7-3**

**Population Density 2035**  
*in the Sacramento Region*



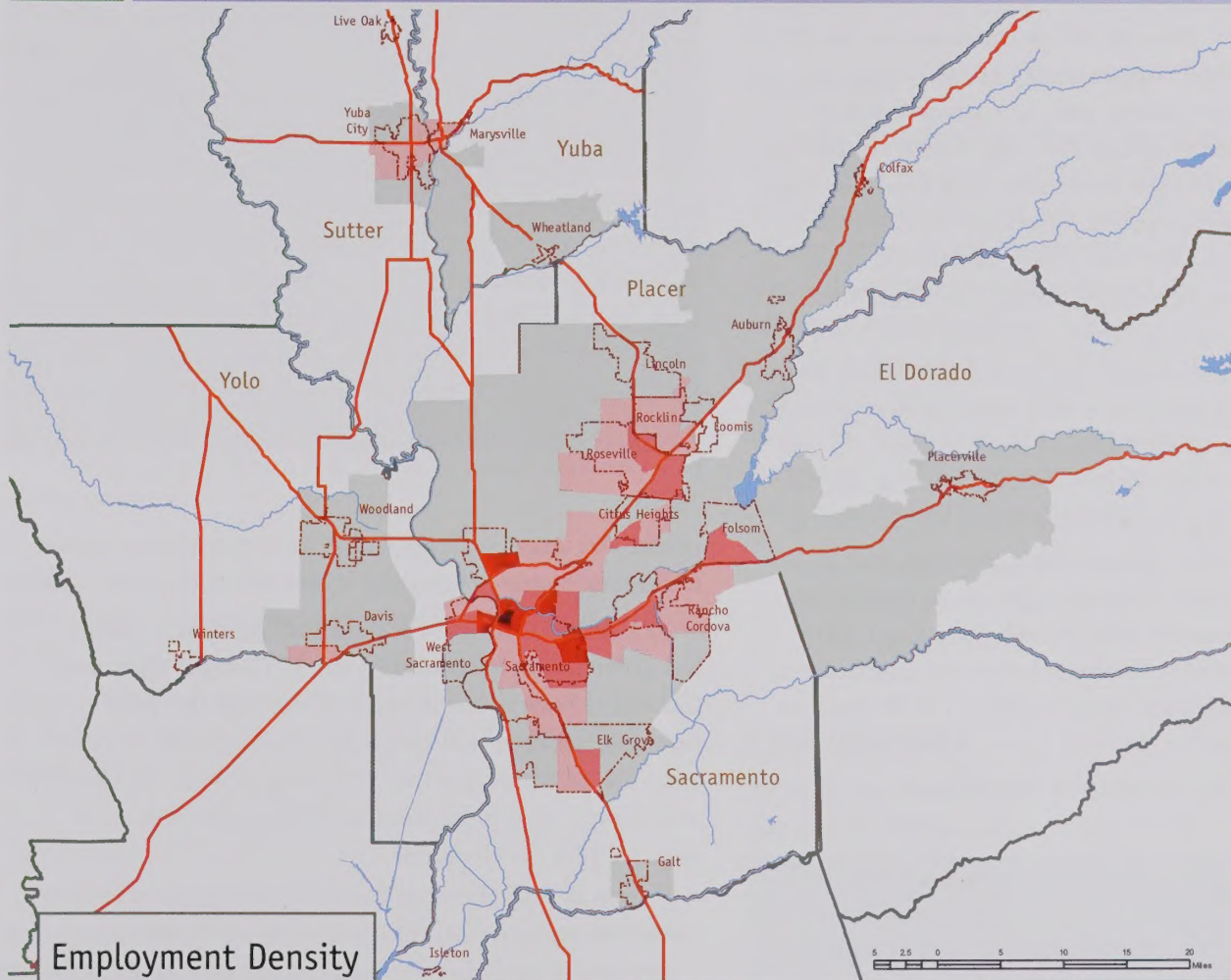






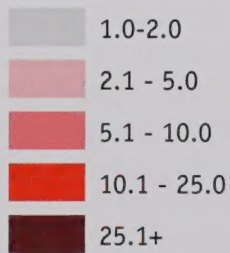
**FIGURE**  
**7-5**

# **Employment Density 2035** *in the Sacramento Region*

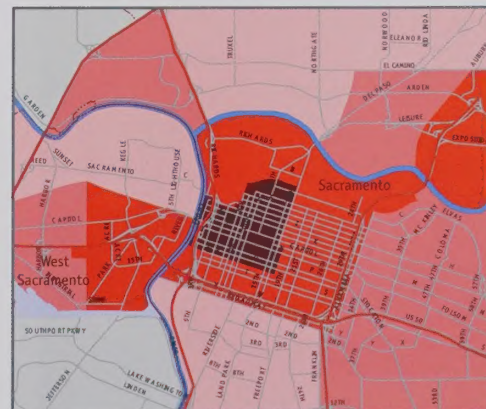


## **Employment Density**

Employees/Acre  
by Sub RAD



Source: SACOG, August 2008





## STRATEGIC LAND USE GROWTH WITHIN THE REGION

### *City of Sacramento*

**The city of Sacramento has identified “opportunity areas”—centers, corridors, and new growth areas—throughout the city where significant changes in density and land use will be targeted.** Mixed-use development is planned near transit stations and along commercial and transit corridors. The regional center—including downtown Sacramento, the redeveloped Union Pacific Railyards, the West Sacramento waterfront and the Richards Boulevard area—is one of the primary hubs for new housing and employment. This center will double the size of the current downtown, with a much stronger emphasis on housing to provide balance with the regional jobs center. Smaller sub-regional centers are also planned for the north and south portions of the city, with a new employment center also planned for Natomas.



### *Sacramento County*

**Sacramento County will maintain its position as the urban center of the region, with a 59 percent share of the population.** The county will also have the highest population and housing densities in the region due to infill and redevelopment strategies in the cities of Sacramento, Rancho Cordova, Citrus Heights and the unincorporated county. New growth is projected to occur within and contiguous to the urban core. Sacramento County’s new general plan intends more housing and employment growth in the unincorporated county than previously, using four growth-management strategies—commercial corridors, new growth areas, infill parcels, and planned communities. Significant growth is expected along the U.S. 50 corridor, in Rancho Cordova and Folsom, creating a much more balanced jobs-housing ratio in that major employment corridor.

### *El Dorado County*

**El Dorado County will generate moderate jobs-led growth concentrated in the El Dorado Hills and Cameron Park areas along U.S. 50, and the jobs-housing balance will improve.** Once specific-planned areas are built out, most new housing growth will be slow and in rural residential areas, and Placerville will grow through infill development.

### *Placer County*

**Placer County will grow primarily in and around the cities of Roseville, Rocklin and Lincoln, which have emerged as a regional employment center.** Southwest Placer County will be the location of most of the new housing and possibly two new colleges or universities. Rocklin is facing build-out, but Lincoln is projected to have a large amount of growth in both jobs and housing in the future. Most of the cities of Placer County have downtown revitalization plans.





### Sutter County

Sutter County's growth is projected to occur primarily within cities, in accordance with the county's general plan policy to preserve agriculture, although 20 percent of housing growth is expected to occur in a new mixed-use community proposed for the State Route 99/70 corridor in southern Sutter County, just north of the Sacramento County line.

### Yolo County

Yolo County operates under an agricultural preservation policy that directs urban development into existing cities and towns. Moderate, balanced growth is expected in Winters and Woodland, with slow balanced growth in Davis and the unincorporated county. Significant growth is expected in West Sacramento; infill and reuse will occur north of the Port of Sacramento and greenfield build-out will occur in the Southport community. West Sacramento will improve its jobs-housing balance during this period. All of the cities of Yolo County use infill and redevelopment strategies targeted to their downtown cores. The unincorporated county is updating its general plan to reaffirm its commitment to agricultural preservation and introduce new rural vitality strategies that

target new growth to rural communities in order to increase the range of services available to those residents while strengthening the county's financial basis.

### Yuba County

Yuba County's significant housing-led growth through 2035 is expected to be concentrated in the State Route 70 and State Route 65 corridors of the unincorporated county and the city of Wheatland. Slow balanced growth is expected in Marysville, with job centers remaining in Marysville and Beale Air Force Base. **Many workers, however, will be commuting to Sacramento or Placer counties.**

For additional information on the region's projected growth patterns, please see Appendix D2.

## LAND USE ISSUES

### How do we achieve the necessary density for efficient transit service?

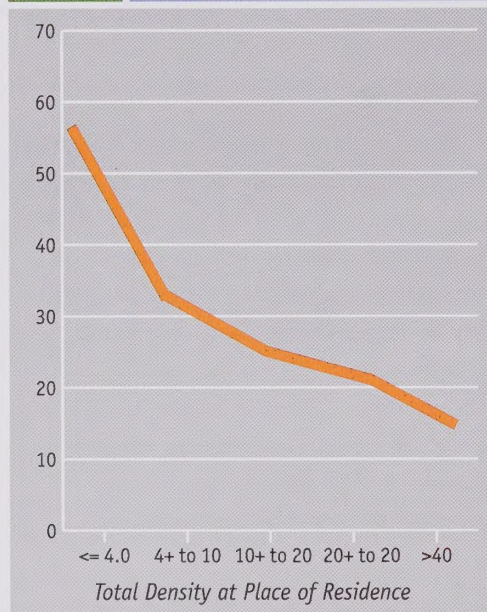
- Where higher growth rates are projected to occur, those areas must develop with higher residential and employment densities if expanded transit service is to be successful. These higher density areas should not be scattered randomly but should be developed near community activity centers, regional job centers, and along key transit corridors.

- San Francisco Muni, operating in the densest residential and employment environment in California, carries an average of 680 passengers per vehicle per day; Los Angeles MTA, in a relatively high



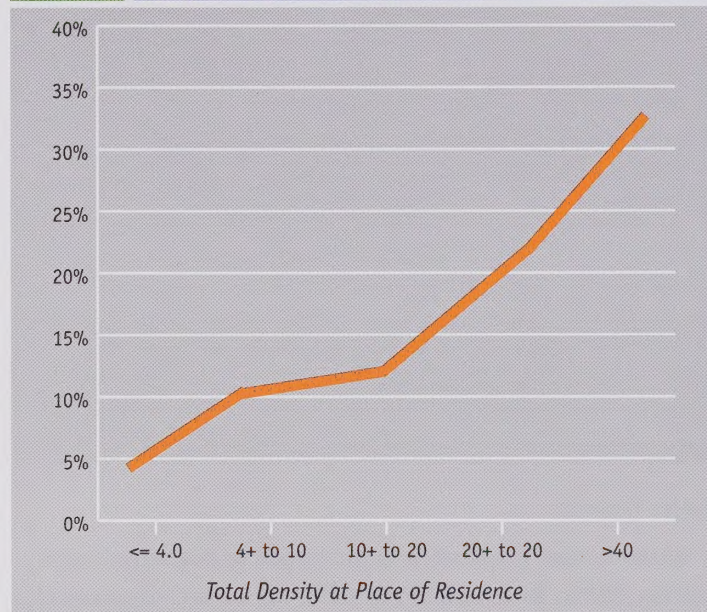


**FIGURE 7-6** Vehicle Miles Traveled per Household in the SACOG Region



Source: SACOG Household Travel Survey, 2000

**FIGURE 7-7** Percentage of Non-Auto Trips per Household in the SACOG Region



Source: SACOG Household Travel Survey, 2000

density urban/suburban setting carries 500 passengers per vehicle per day; and Sacramento Regional Transit, operating primarily in a low density suburban environment, currently carries 350 passengers per vehicle per day.

- Residential and employment density, and the presence of major trip attractions such as educational facilities, are significant factors in cost efficiency of new transit services.

- Regional and local agencies need to find additional funds to operate more transit service to coincide with higher-density developments.

- There will be a tradeoff between developer fees to expand the road system

serving infill developments and the need to keep infill fees lower as an incentive.

- There is also the challenge of meeting objectives that may conflict, such as planning for goods movement-related land uses (such as warehousing and truck stops) that are incompatible with residential and mixed-use land uses.

### **How do we achieve mixed-use when traditionally people perceive that separation of residence from other noisy, traffic-generating uses is better?**

Developments that provide shopping, services and recreation in community activity centers near where people live allows the 80 percent of all trips that are not highway trips to be shorter and made by walking, bicycling, or taking transit.

Figure 7-6 illustrates the strong relationship between land use densities and VMT per household and trips with a mode of travel other than the automobile.



**Transit oriented development (TOD) at key locations has been slow to materialize.**

- Research in suburban Maryland found that those within walking distance of high-quality transit service were 10 percent to 45 percent more likely to use transit than those who had to drive for access.
- A study in Sacramento also showed that those who lived within a quarter mile of light rail were 40 percent more likely to use it than those who had to drive for access.
- San Jose built about 4,500 housing units and 9 million square feet of commercial office space within walking distance of the Tasman West light rail line between 1997 and 1999, and saw daily ridership on its two-line light rail system increase from 20,000 in 1996 to more than 25,000 by 2000.
- The land use base for the MTP2035 places 41 percent of jobs and 38 percent of housing within one-quarter mile of a high level of transit service.

Figure 7-7 illustrates the strong relationship between land use densities and percent of non-auto trips, such as walking, biking or transit trips.

**Is it better to use transit expansion policy and investments to shape land use decisions, rather than simply to increase service in an attempt to lure more riders?**

- The lion's share of growth in transit ridership must come from more choice riders and must include both commute trips and some local travel for other purposes. The transition from lifeline transit service for the transit-dependent to transit as a mode of choice is a challenging one, because infill and compact development at some point requires high levels of transit services, but that level of service does not operate efficiently until compact development is in place.
- Modeling of the Preferred Blueprint Scenario compared to Base Case for 2050 showed an increase from 135,000 transit trips to 550,000 transit trips daily, an increased share of all commute trips from 2.3 percent to 7.8 percent, and an increased share of commute trips to downtown Sacramento from 20 percent to 44 percent.

■ Communities with strong activity centers and jobs-housing balance need transit services tailored to more localized travel patterns, for choice riders and trips other than commuting.

■ Employment centers, both downtown Sacramento and in suburban areas, need to cultivate high office density, buildings close to sidewalks, and appropriate parking prices to enable efficient transit access.

**How do we provide affordable housing in all communities, especially in light of development fees needed to build roads and other transit?**

Housing choices should be available so that employed persons aren't forced to drive long distances to work ("drive until you qualify"), and so that people of all incomes and ages can find housing that is near their frequent destinations.





C H A P T E R 8

# Environmental Sustainability



ENVIRONMENTAL  
QUALITY AND  
SUSTAINABILITY:  
MINIMIZE NEGATIVE  
TRANSPORTATION  
IMPACTS ON THE  
ENVIRONMENT FOR  
CLEANER AIR AND  
NATURAL RESOURCE  
PROTECTION.



**Air quality is an important part of the MTP2035 due to the widespread consequences it has for public health and the environment.** Topography and a hot summer climate make the Sacramento region especially subject to poor air quality. Pollution can become trapped under an inversion layer of air that caps the bowl-shaped valley. With a projected population increase of another million over the next 25 years, the region will continue to face an enormous challenge in meeting and maintaining state and federal health-based air quality standards. Failure to do so will have a significant impact on the region's quality of life and economy.

Since the enactment of the Federal Clean Air Act in 1970, the Sacramento region has failed to meet federal and more stringent California air quality standards. **Currently, the Sacramento region's ozone pollution is the seventh-worst in the United States.** High ground-level ozone levels decrease lung function and can cause other serious health problems, and several common vehicle pollutants are classified as carcinogenic. The emission of carbon dioxide and other greenhouse gases contributes to global warming.

Over the last two decades, air quality and transportation agencies have focused on reducing ozone through new rules for businesses, smog controls on cars, fuel-efficiency standards, cleaner diesel engines, and incentive programs to reduce driving or replace dirty engines with cleaner ones. **While vehicle technology has progressed, transportation still accounts for more than 60 percent of the region's emissions due to an increase in the number of cars in use and associated vehicle miles traveled.** However, technology improvements have led to a gradual decline in summer ozone levels. The region still exceeds the new, stricter federal ozone standards for eight-hour periods each summer, but the region is making progress. In the three-year period from 1999–2001, there were an average of 44 days that exceeded the standard. In the next three-year period, that number dropped to 39, and in the most recent three years, it dropped to an average of 33 days. **In 2005, the federal government gave the region eight years to reduce ozone another 20 percent.**

To ensure that the region qualifies for federal transportation funds, SACOG must demonstrate that the MTP2035 and related programs are consistent with the federal clean air goals by certain milestone years. In a process called "air quality conformity," SACOG uses its transportation model and an air quality model to calculate the vehicle miles traveled and air emissions that result from implementation of its plans, and then compares this calculation to federal standards for this region. Figure 8-1 shows the Federal Air Quality Planning boundaries in the Sacramento region.

## FUEL CONSUMPTION AND CLIMATE CHANGE

Worldwide demand for oil is growing steadily and now consumes virtually all available supply during peak use periods. Current world oil usage is about 84 million barrels per day, adding about 3 million barrels to the daily average per year. Estimates vary, but a common baseline projection calls for demand to rise by about 45 percent, to around 120 million barrels per day by 2025 to 2030. There is some question as to whether the world could sustain oil production at a level that high for 25 more years.

The U.S., with approximately 5 percent of the world's population, accounts for approximately 25 percent of world oil consumption, or approximately 21 million barrels per day (EIA 2007). Most of the increase in world oil demand comes from the transportation sector, where





**FIGURE**  
**8-1**

## Federal Air Quality Planning Boundaries in the SACOG Region



Source: SACOG, July 2008

there are the fewest available alternatives to petroleum. Two-thirds of the U.S. oil consumption is in the transportation sector (14 million barrels per day). In California, petroleum-based fuels currently provide approximately 96 percent of the state's transportation energy needs (State of California 2007). **Over the last 20 years, California's consumption of gasoline and diesel fuel increased 50 percent.**

**If there are no significant policy or market changes, transportation-related fuel consumption is projected to increase another 18 percent by 2025.**

World oil prices have more than tripled in the last three years. The price of fuel in California has nearly doubled in the last five years, driven by the fact that crude oil cost accounts for about half of the price of fuel.

**The consumption of fossil fuels such as gasoline, diesel and natural gas by motor vehicles has been shown by scientists to lead directly to climate change.**



The challenge here is different than it is to control air pollution: carbon dioxide (along with water) is the natural end product of the clean burning of petroleum fuels, so the only way to reduce the influence of global climate is to reduce the amount of fuel burned, or to find a new fuel for vehicles that does not come from oil. Even carbon emissions from “cleaner” sources such as natural gas, ethanol, or electricity (unless derived from solar, wind, or nuclear energy) play a role in climate change. Carbon dioxide forms approximately 84 percent of all greenhouse gas emissions in California.

**To reduce the negative effects of fossil fuel consumption and climate change, two themes emerge.**

■ **First, technology changes (cleaner engines, better gas mileage and alternative fuels) have the potential to slow the effects of climate change.** In addition, higher prices will regulate fuel consumption. However, there is a worry that the shift to more energy-efficient vehicles will occur too slowly to avoid potentially significant crises that will challenge the transportation system.

■ **This leads to the second theme: changing travel behavior.** If people shift to greater use of alternative modes (transit, bicycling and walking), as discussed in Chapter 11, the effects on the environment and the reliance on oil is reduced, and people will have choices if the price of fuel rises too high.



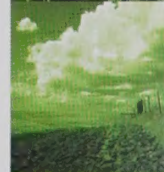
California is leading legislative actions to reduce emissions, such as the Global Warming Solutions Act, Assembly Bill 32, which sets targets for greenhouse gas emission reductions. [A full discussion of global climate change is found in Environmental Impact Report, Chapter 9.]

## STORM WATER DRAINAGE

Based on Caltrans reports, **there is an approximately \$15 million unmet need in this region for drainage system improvements and water treatment facilities on state highways to satisfy water quality board permits.** These upgrades would ensure that state highway storm drains comply with federal and state water quality standards in rural areas. The cost in urban areas remains undefined.

**Local agencies would need to spend a much larger sum for local street and road storm water runoff,** probably greater than \$50 million, if water quality boards decide to emphasize water pollution from street runoff. Runoff from nearby properties (such as from roofs, parking areas and landscaping that ends up in street drains) complicates the problem for urban areas.

**Very few of these types of storm drainage retrofits have any dedicated sources of funding available to them,** probably because they don't fit neatly into the categories of “new system” or “maintenance.” To fund them, the region will have to consider some or all of these a priority for use of regional discretionary funding.





## NOISE POLLUTION

**Road noise is caused by engine noise, exhaust noise, and tire whine.**

Most road noise occurs near free-ways and major arterials as congestion increases; however, traffic is diverted to local streets and can increase sound levels in neighborhoods. Large trucks especially cause engine and exhaust noise along highways and freeways. Tire whine from all vehicles increases with speed and worse pavement conditions.

**Noise pollution is a problem in the region and important to maintaining expectations for quality of life.**

However, when compared to other issues such as road maintenance, congestion and environmental protection, it is often difficult to obtain regional funds for noise reduction projects.

**Soundwalls are the typical method used to mitigate road noise, but newer, quieter pavements can also be effective.** Since the passage of Senate Bill 45 in 1997, responsibility to fund



retrofit soundwalls along state highways has devolved from the state to regional agencies such as SACOG.

Caltrans is responsible for building soundwalls as environmental mitigation for building new freeways or adding capacity to older ones. Developers or local governments occasionally build soundwalls to mitigate traffic noise, but only as part of a new development when a significant road project is being built adjacent to an existing or planned community. **However, there is not a current program to fund the increasing need for soundwall construction to keep up with increasing traffic noise.**

A high-quality concrete block wall costs an average \$1.3 million per mile to construct. Caltrans and SACOG have created a preliminary inventory of soundwall retrofit needs in the region, including a list of 42 projects along 30 miles of freeways, local streets, and railroads. At an average cost of \$1.5 million per mile, building these soundwalls would cost approximately \$45 million. **Quieter pavements can reduce tire whine, but are expensive and hard to justify if the pavement is otherwise still serviceable.**

## LAND CONSERVATION AND HABITAT PRESERVATION

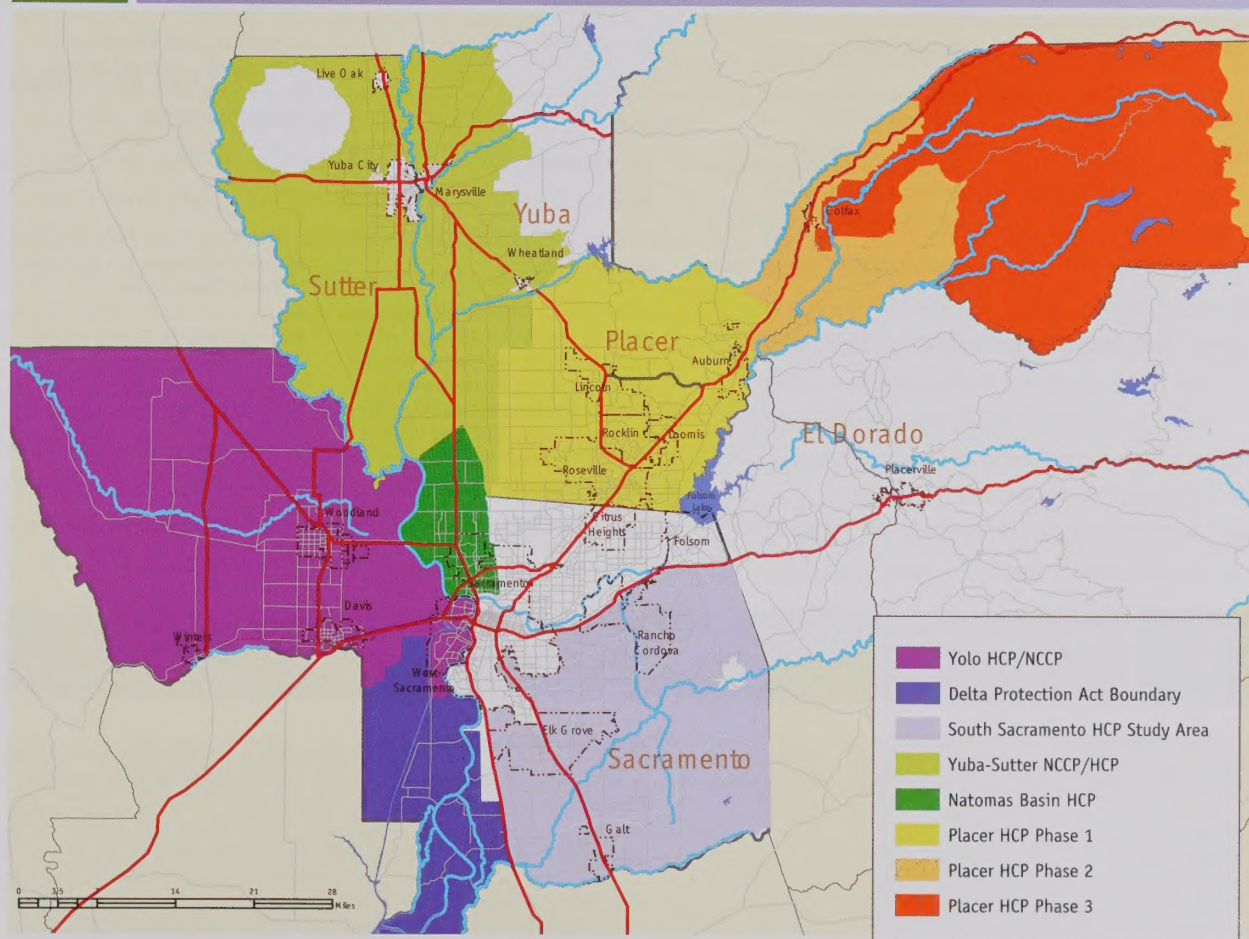
According to federal and state requirements, every land development and transportation project must mitigate, or compensate for, the effects on sensitive habitat and open space. In response to the mandate to conserve natural resources in a more systematic manner, several jurisdictions in the region have been developing Habitat Conservation Plans (HCPs) and Natural Communities Conservation Plans (NCCPs). **Figure 8-3** is a map of the HCP and NCCP boundaries within the SACOG region. **Table 8-1** lists the current HCPs and NCCPs in the region and their current status. **Appendix D1** includes background information on environmental issues by county.

Once complete, these HCPs and NCCPs will guide preservation of areas with the highest natural resource value for species (including open space connections between them) and mitigation priorities as other lands get converted to urban uses.



**FIGURE**  
**8-3**

## Habitat Conservation Plan in the SACOG Region



Source: SACOG, July 2008

### AIRPORT LAND USE COMPATIBILITY

According to state law, each county has an Airport Land Use Commission (ALUC). SACOG serves as that agency for Sacramento, Sutter, Yolo and Yuba counties. The Placer County Transportation Planning Agency and El Dorado County Transportation Commission serve in that role for their respective counties. The ALUC prepares an Airport Land Use Compatibility Plan for each general use airport that provides for the orderly growth of the airport itself and the area surrounding it. Its primary function is to protect residents in the vicinity of the airport as well as the general

public. Cities and counties must submit their general and specific land use plans to the ALUC upon adoption or amendment, and these plans must be consistent with the Airport Land Use Compatibility Plan.

Table 8-2 shows the ten MTP2035 projects with segments of proposed roadways that would be within nearby airport influence area boundaries. These



**TABLE  
8-1****Developing Habitat Conservation Plans (HCPs) and Natural  
Communities Conservation Plans (NCCPs)**

| Area                            | Status                                                                                   | Area covered                                                                                                                                                                                                                                              | Species covered                                                      |
|---------------------------------|------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------|
| South Sacramento HCP            | In preparation                                                                           | 345,000 acres                                                                                                                                                                                                                                             | 41 plant and wildlife species (12 state or federally listed species) |
| Natomas Basin HCP               | Approved in 2003                                                                         | 53,537 acres                                                                                                                                                                                                                                              | 22 sensitive species                                                 |
| Yuba-Sutter HCP/NCCP            | Science advisor's report finalized in February 2006; public participation plan has begun | 200,100 acres                                                                                                                                                                                                                                             |                                                                      |
| Yolo County HCP/NCCP            | Science advisor's report finalized March 2006                                            | 400,000 acres                                                                                                                                                                                                                                             | 28 sensitive species (13 state and federally listed species)         |
| Placer County Conservation Plan | Phase 1 currently underway                                                               | Phase 1: covers 273,983 acres of the valley floor and low foothill portions of Placer County; Phase 2 covers 273,717 acres in the foothills and the Martis Valley area; and Phase 3 is proposed to cover 412,153 acres of public and private timberlands. | Five plant and 28 wildlife species                                   |

**TABLE  
8-2****MTP Projects within Nearby Airport Influence Area Boundaries**

| Project Name                                 | Airport                          | Project Description                                                                                       |
|----------------------------------------------|----------------------------------|-----------------------------------------------------------------------------------------------------------|
| Elkhorn Boulevard                            | Sacramento International Airport | Realign road: two lanes from Power Line Road to Lone Tree Road (includes median with landscaping)         |
| Happy Lane                                   | Mather Field                     | Extend: four lanes from Kiefer Boulevard to Gerber Road                                                   |
| Kiefer Boulevard                             | Mather Field                     | New Road: four lanes from Bradshaw Road to Sunrise Boulevard (includes bicycle and pedestrian facilities) |
| Metro Air Parkway                            | Sacramento International Airport | New Metro Air Parkway Interchange on I-5                                                                  |
| Metro Air Parkway                            | Sacramento International Airport | New road: four lanes from I-5 to Elverta Road                                                             |
| Zinfandel Drive                              | Mather Field                     | New road: six lanes from Douglas Road to south terminus                                                   |
| Zinfandel Drive                              | Mather Field                     | Extend: six lanes from south of Rancho Cordova city limits to International Drive                         |
| Downtown-Natomas-Airport Rail Extension—MOS3 | Sacramento International Airport | Extend rail from Natomas Town Center to Sacramento International Airport                                  |
| Lincoln Bypass                               | Lincoln Airport                  | State Route 65: new two- and four-lane expressway                                                         |
| Aviation Lane                                | Lincoln Airport                  | New road                                                                                                  |



proposed projects will require consistency determinations with applicable ALUCPs. According to the EIR, this impact is less-than-significant, with no mitigation required.

## FARMLAND QUALITY

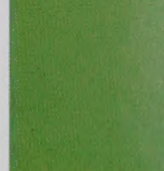
In 2004, 64 percent of the region's 4,200,000 acres were classified as agricultural land (California Department of Conservation 2004). Factors that affect farmland quality include the physical and chemical characteristics of a site's soils (i.e., soil quality) as well as climate, moisture supply, topography, and the quality and availability of irrigation water.

An important farmland map has been produced for the MTP Plan Area. **Figure 8-4**, Significant Agricultural Lands, depicts areas devoted to Prime Farmland, Unique Farmland, Farmland of Statewide Importance, and Local Important Farmland (California Department of Conservation 2004).

Most of the land located west of the Sierra Nevada foothills and east of the Capay Hills is classified as Important

Farmland (i.e., either Prime Farmland, Farmland of Statewide Importance, Unique Farmland, or Farmland of Local Importance). An acreage summary of Important Farmland (referred to as FMMP) mapping categories is presented in **Table 8-3**.

**Table 8-3** shows that Important Farmland is concentrated in the counties of Sacramento, Sutter and Yolo, due to the fertile soils and flat topography of these valley counties: western Yolo County, the eastern one-third of Sacramento County, the Sutter Buttes region in Sutter County, and the foothill regions of El Dorado, Placer and Yuba counties are predominantly classified as grazing land (**Table 8-3**). Although El Dorado, Placer and Yuba counties contain less "Important Farmland," these counties contain significant grazing and "Other" land. Only 10 percent of the region is





**TABLE  
8-3**

**Acreage Summary of FMMP Mapping Categories  
in the SACOG Region**

| County                           | El Dorado      | Placer         | Sacramento     | Sutter         | Yolo           | Yuba           | Region           |
|----------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|------------------|
| Important Farmland Category:     |                |                |                |                |                |                |                  |
| Prime Farmland                   | 886            | 9,236          | 110,278        | 166,203        | 259,637        | 42,678         | 588,918          |
| Farmland of Statewide Importance | 926            | 5,509          | 56,141         | 107,743        | 18,123         | 11,094         | 199,536          |
| Unique Farmland                  | 4,388          | 23,283         | 15,188         | 19,480         | 53,157         | 33,108         | 148,604          |
| Farmland of Local Importance     | 60,530         | 86,234         | 39,873         | 0              | 66,619         | 0              | 253,256          |
| Important Farmland Total         | 66,730         | 124,262        | 221,480        | 293,426        | 397,536        | 86,880         | 1,190,314        |
| Grazing Land                     | 196,901        | 46,000         | 163,173        | 50,637         | 145,227        | 143,533        | 745,471          |
| Farmland Subtotal                | 263,631        | 170,262        | 384,653        | 344,063        | 542,763        | 230,413        | 1,935,785        |
| Urban and Built-Up Land          | 30,670         | 52,181         | 165,629        | 12,581         | 28,511         | 12,081         | 301,653          |
| Other Land                       | 235,334        | 184,058        | 67,548         | 30,914         | 74,357         | 163,034        | 755,245          |
| Water                            | 6,819          | 5,027          | 18,253         | 1,883          | 7,821          | 6,289          | 43,092           |
| Non-Farmland Total               | 272,823        | 241,266        | 251,430        | 45,378         | 110,689        | 181,404        | 1,102,990        |
| <b>Total Area Inventoried</b>    | <b>536,454</b> | <b>411,528</b> | <b>636,083</b> | <b>389,441</b> | <b>653,452</b> | <b>411,817</b> | <b>3,038,775</b> |

*Source: Farmland Mapping and Monitoring Program, 2002-2004 Farmland Conversion Reports*

**TABLE  
8-4**

**Williamson Act Lands within the SACOG Region**

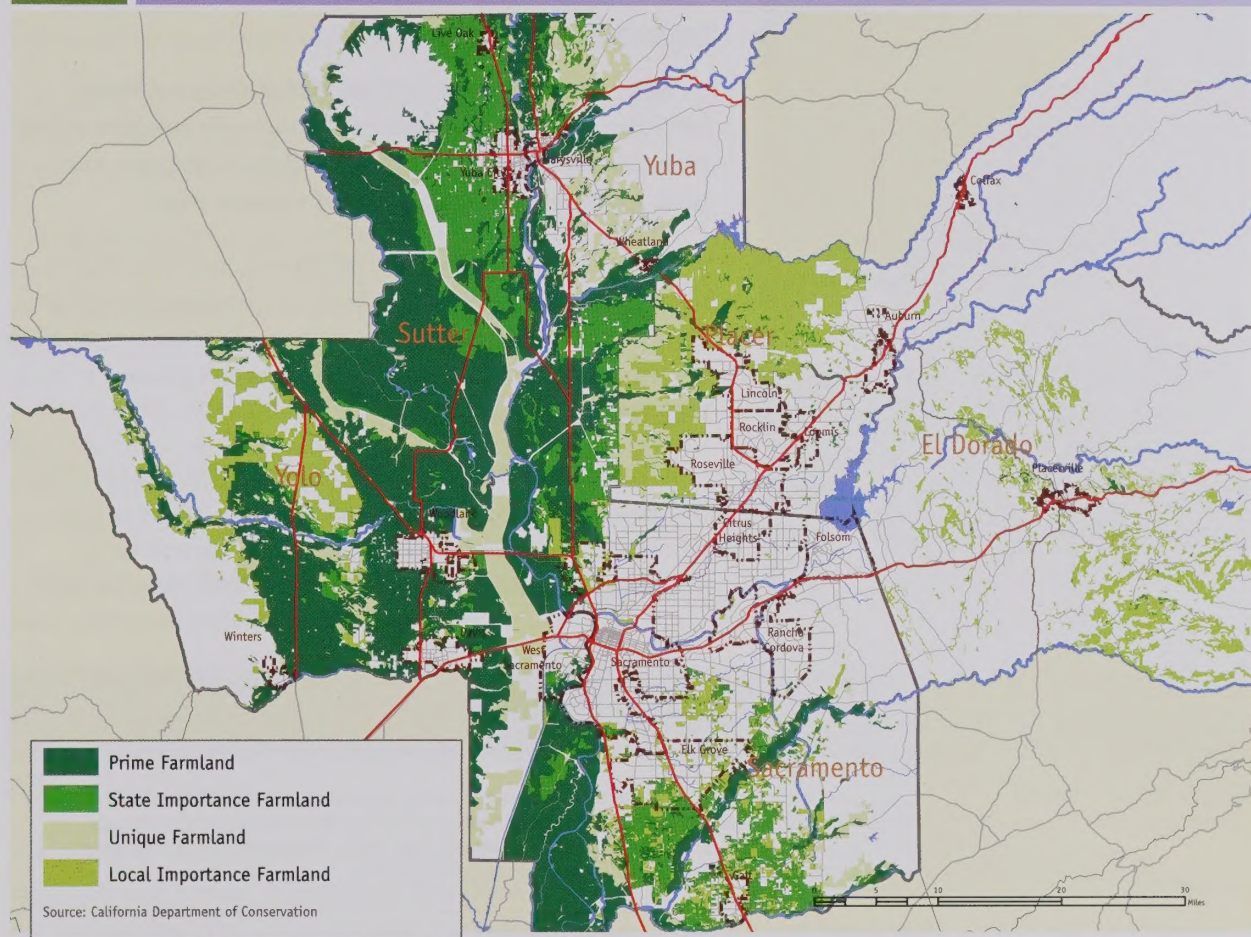
|                          | Prime          | Nonprime       | Total          | Percent     |
|--------------------------|----------------|----------------|----------------|-------------|
| El Dorado                | 2,136          | 33,016         | 35,152         | 5%          |
| Placer                   | 16,162         | 28,861         | 45,023         | 6%          |
| Sacramento               | 86,979         | 90,339         | 177,318        | 24%         |
| Sutter                   | 43,135         | 11,376         | 54,511         | 7%          |
| Yolo                     | 242,090        | 176,845        | 418,935        | 57%         |
| Yuba                     | 0              | 0              | 0              | 0%          |
| <b>Sacramento Region</b> | <b>390,502</b> | <b>340,437</b> | <b>730,939</b> | <b>100%</b> |

*Source: The California Land Conservation (Williamson) Act Status Report 2006, California Department of Conservation, Division of Land Resource Protection*



**FIGURE**  
**8-4**

## Significant Agricultural Lands in the SACOG Region



currently urbanized. According to FMMP 2002-2004 Farmland Conversion reports, 25,222 acres of agricultural land were converted to other uses during the two-year span (California Department of Conservation, 2004), which amounts to a 1 percent loss. New and expansion roadway and highway projects in the 2035 MTP have the potential to directly impact farmland along as many as 379 linear miles of roadway. Because these projects include expansion projects that are additions to existing roadways, actual farmland acreage loss could not be estimated due to the lack of existing roadway-width data. Urban development pressures affect the agricul-

tural lands in all of the counties in the SACOG region due to high population growth in the region and in Northern California in general, especially at the edge of urban development.

The Williamson Act, dating from the 1970s, allows farmland owners to contract to keep land in agricultural use for the next ten years, in return for



a lower property tax rate based on its agricultural production value instead of its potential value for urban development. The Williamson Act thereby prevents or postpones conversion of farmlands to urban uses, where the landowner wants to keep farming. Table 8-4 shows the amount of agricultural lands under Williamson Act contract in each of the Sacramento region's six counties (Yuba County does not participate in the Williamson Act program).

As of 2004, the Sacramento region contained a total of 730,939 acres of land contracted under the Williamson Act. Of those acres, over 390,000 acres were prime farmland and about 340,000 acres were nonprime. More than 50 percent of

both prime and non-prime lands under contract are located in Yolo County. Just under one-quarter of all contract acres are located in Sacramento County.

ENVIRONMENT ISSUES

How much can we rely on technology—clean-burning engines and fuel efficiency—to achieve objectives for air quality and global climate change, and how much on the reduction of vehicle trips?

- There is no political consensus on the best way to meet federal air quality standards. Technology improvements to conventional combustion engines have slowed or decreased air quality problems but haven't proven to be a long-term solution.
- The only technology improvements that can be effective against climate change would have to increase fuel efficiency significantly, allow use of non-carbon fuels, or perhaps capture the carbon dioxide that goes out the

| TABLE 8-5                                                               | State of California Policies                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  |
|-------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| State of California Integrated Energy Policy Report                     | In 2002, the Legislature reconstituted the state's responsibility to develop an integrated energy plan for electricity, natural gas and transportation fuels. These reports make recommendations to increase California's energy supplies, reduce energy demand, broaden the range of alternatives to conventional energy sources, and improve the state's energy-delivery infrastructure.                                                                                                     |  |
| Alternative Fuels Plan<br>Assembly Bill 1007 of 2005                    | Requires the California Energy Commission to prepare a state plan to increase the use of alternative fuels in California. The plan shall set goals for increased alternative fuel use in the state for the years 2012, 2017 and 2022 and recommend policies to ensure the alternative fuel goals are attained, including standards on transportation fuels and vehicle and policy mechanisms to ensure vehicles operating on alternative fuels use those fuels to the maximum extent feasible. |  |
| Bioenergy Action Plan<br>Executive Order #S-06-06                       | Establishes targets for the use and production of biofuels and biopower and directs state agencies to work together to advance biomass programs in California while providing environmental protection and mitigation.                                                                                                                                                                                                                                                                         |  |
| Low Carbon Fuel Standard<br>Executive Order #S-01-07                    | Establishes a statewide goal to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020 through establishment of a Low Carbon Fuel Standard.                                                                                                                                                                                                                                                                                                           |  |
| California Strategy to Reduce Petroleum Dependence<br>(AB 2076 of 2000) | Recommends that California reduce on-road gasoline and diesel fuel demand to 15 percent below 2003 demand levels by 2020 and maintain that level for the foreseeable future; the Governor and Legislature work to establish national fuel economy standards that double the fuel efficiency of new cars, light trucks, and SUVs; and increase the use of non-petroleum fuels to 20 percent of on-road fuel consumption by 2020 and 30 percent by 2030.                                         |  |



exhaust pipe (an approach that offers far more promise for factory smokestacks than on-board vehicles).

- Reducing the number of auto trips is one solution, but achieving this is difficult and often controversial.

- Better transit service can reduce the number of trips people make by car, but only a relatively small share of trips (1 percent) are on transit.

- Significant increases to the cost of driving do effect travel behavior, but policies that try to accomplish this are unpopular because of the potential social equity and economic costs.

- It is unknown how the rising cost of fuel will ultimately affect the amount of driving in the region. So far, it hasn't made a large difference, although many people are buying cars that get better gas mileage and pollute somewhat less.

### **How can we reduce fossil fuel consumption and slow down climate change?**

- Climate change and fuel consumption are among the most vexing issues facing the region, as to where fuel conservation could be most effective and what to do to move in that direction.

- The state of California is attempting to address these issues through a series of plans and legislative bills (Table 8-5).

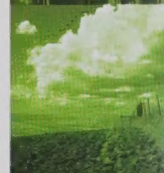
- Cities and counties are implementing local regulation through their general plans.

- The energy conservation measures outlined in the various county and city general plans of the SACOG region contain goals, objectives and policies aimed at reducing energy consumption. Proponents of specific MTP projects will be required to consult the applicable general plans and design the projects to be consistent with them.

**It is an open question whether travel behavior will change significantly if the price of fuel continues to rise.**



- The limited data that exist suggest that fuel at its current price has resulted in small behavior changes. We know that as prices rise, lower-income users will be forced to change behavior sooner than others. The question is how high the price of fuel will have to be to cause a significant decrease in driving. Recent studies in Europe show that gas prices of \$3.50 to \$4.00 a gallon are the tipping point, although the past is not necessarily a good predictor of the future in terms of gas price elasticity. Active efforts by SACOG staff will continue in order to





better understand the regional impact of high gas prices on travel behavior.

- If we get to the point where fuel demand significantly outstrips supply, consumers will have no choice but to change their travel behavior, as they did temporarily in 1973-74. Travel options range from taking fewer auto trips, carpooling and buying more fuel-efficient vehicles, to using transit, walking, bicycling, or using some other mode of transportation. People can also change the locations of their homes, jobs or both to reduce their travel miles. People who live in areas with a mix of land uses in close proximity, and with nearby transit, walking and bicycling facilities will probably experience less inconvenience and disruption to their daily lives than others.

- The last MTP did not explicitly address the issue of reliability of transportation fuel supplies and assumed that the real cost of fuel would remain flat through the 23-year planning period. In the MTP2035, the cost of fuel rises by 150-200 percent by 2035 in real (inflation-adjusted) terms. Even with this increase, the SACOG travel model shows that there is a relatively small reduction in vehicle miles traveled due to this reason. One limitation of the travel model is that it can only estimate short-term effects. The short-term effects from the changing cost of travel involve shifting from autos to transit, while long-run effects are greater and include relocating homes or work locations to shorten travel.

- Changing travel behavior is a major component of reducing the region's dependence on fossil fuel and overall energy consumption. To change travel behavior, the region must be able to provide viable, cost-effective alternatives to driving alone, show people that these alternatives are safe, easy and efficient, and reduce the distances people must travel to work and other destinations.





**Public transportation can play a role in reducing fuel consumption, but it is limited.**

■ Trains and buses consume relatively large quantities of fuel, but because they can carry multiple passengers, they are more efficient per user than driving alone. Diesel buses get about 3 miles per gallon, versus an average of 20 miles per gallon for automobiles, so a bus carrying seven or more riders becomes more efficient than driving alone.

■ At current ridership levels, Sacramento Regional Transit's light rail uses only 22 percent as much fuel per passenger mile as autos. The benefits increase dramatically as more people use rail or bus as a primary mode of transportation. These benefits are sometimes offset by fare increases that are necessitated by rising fuel prices.

■ Technology is helping to increase the fuel consumption and air quality advantages of public transportation. Electric-rail transit vehicles and trolley buses emit little or no pollution at the point of operation. Diesel buses, with innovations such as clean diesel fuel, are becoming less polluting. Many newer buses are fueled by alternative fuels such as compressed natural gas (CNG), which improve air quality and comply with federal and state pollution-reduction requirements. The bus fleets operated by Sacramento RT and YoloBus are completely powered by CNG. About 90 percent of the service provided by Davis Unitrans is fueled by CNG, and it operates one even-cleaner prototype hydrogen-natural gas blend bus.

**Bicycle and pedestrian trips are the most energy-efficient forms of transportation, but their potential to reduce fuel consumption is also limited.**

■ While bicycle and pedestrian trips compose a larger share of daily trips than transit, they don't have a large impact on fuel consumption because of the relatively short distances traveled.

■ Decisions to make bicycle and pedestrian trips are influenced by community design and safety concerns.



■ People are less likely to walk or bike for longer trips or in areas they perceive as unsafe.

■ As land use patterns become more compact and contain more bicycling and walking facilities, these trips will become more competitive with other forms of transportation.

**Mixing land uses brings trucks and their environmental impacts into residential areas.**

■ Trucks that serve mixed-use areas will emit noise and air pollution that will affect nearby residents more than would be the case with segregated land uses, and this will lead to controversy about creating mixed-use or infill development areas. These trade-offs can be addressed through careful planning and design.





**Investments in noise reduction and water runoff compete with other more basic types of transportation improvements.**

- Investments that improve environmental conditions on existing facilities must always compete with projects that create a larger or more effective transportation infrastructure, since there currently are no separate environmental programs that fund these kinds of projects.

**What kinds of methods of reducing noise pollution are acceptable?**

- How do we achieve adequate traffic



capacity on main arterials so traffic won't divert through neighborhood streets, causing noise? There are numerous methods—widening roads and intersections, smoothing traffic flows through signalization and other technologies, and smart-growth measures.

- Do we invest in noise walls or berms along highways and freeways, and if so, which ones should receive priority?

**Can we plan strategically for high ozone days?**

- Would the region's residents and businesses be willing to take strong measures to reduce air emissions on the relatively few days of unfavorable weather that lead to very unhealthy ozone levels? Historically, residents and businesses are opposed to the kinds of high-impact measures that would have to be used, such as "no drive" days or a surcharge on workplace parking on Spare the Air days.

**California farmers near the urban edge face strong growth pressures and have large financial incentives to sell their agricultural land to developers.**

- Vacant land not currently in use for agriculture or designated as open space is highly sensitive to development pressure.

- Farm operations involve dust, chemical spraying, odors, noise, and sometimes night tractor work, which are not readily compatible with next-door residential developments; this puts added pressure to alter or cease farming as the urban edge advances into farm country.

- Use of conservation tools such as easements and fee title purchases are expensive and the perceived benefits do not always trump the benefits of development.

- The reward to jurisdictions for land preservation must be comparable with their reward for land development. Otherwise, there is little incentive for conservation for the jurisdictions that rely on land development to maintain basic services and economic development. Maintaining the economic viability of rural communities needs to be taken into account when trying to preserve open space.

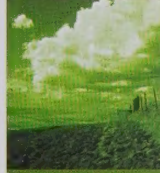




- Information about existing resources is often outdated and new data collection is expensive.
- The review and permitting process for development is inconsistent between jurisdictions and often very difficult to navigate. Currently, there is not a cohesive strategy or plan for regional open space preservation.

### **RURAL-URBAN CONNECTIONS STRATEGY (RUCS)**

The Rural-Urban Connections Strategy (RUCS) will provide policy and technical approaches to address or avoid impacts to resources at a local project level. This will apply to transportation and land use projects. This “toolkit” will be developed with input from a broad spectrum of stakeholders so that it will be as comprehensive and applicable as possible to a variety of planning and project applications. The toolkit will also be used for application in areas where the objective is environmental or rural economic enhancement, rather than response to potential impacts.





C H A P T E R 9

# Equity AND Choice



PROVIDE REAL, VIABLE

TRAVEL CHOICES

FOR ALL PEOPLE

THROUGHOUT OUR

DIVERSE REGION



The focus of this chapter is on equity and choice as it relates to areas in the SACOG region with concentrations of low-income and minority populations. The fundamental objective of the chapter is to analyze whether the MTP2035 benefits low-income and minority communities equitably and the plan's transportation investments do not have disproportionate negative effects on minority and low-income populations.

A broader interpretation of equity and choice involves MTP policies outside this chapter's discussion. These other aspects of equity and choice include:

- All communities send residents traveling through their neighbors' streets, but transportation facilities are not evenly located and some communities complain about disproportionate impacts.
- Investment in regional-scale facilities cannot be divided piecemeal, but must be concentrated onto large projects of system-wide importance, regardless of location. The benefits accrue to all who travel; the impacts, however, fall mainly upon those who live close alongside these facilities.
- All jurisdictions need funds for maintenance, rehabilitation, operations, and improvements, and look to a fair share of regional funding to help beleaguered budgets.
- The division of funding between transit and roads becomes an equity issue as well, because drivers paying gasoline taxes expect road improvements, while the most effective investment for the system may be in transit.

## **PLANNING PROCESS AND LOW-INCOME AND MINORITY COMMUNITIES**

Environmental justice in planning is required by the federal government and is designed to ensure that governmental activities do not have disproportionate negative effects on minority and low-income populations. The Federal Highway Administration (FHWA) requires analyses in its transportation programs that address environmental justice concerns for programs, policies and activities. As a

federally designated metropolitan transportation planning organization, SACOG is required to comply with rules and policies set forth by FHWA. For transportation, environmental justice means assessing the nature, extent and incidence of probable impacts, both negative and positive, from any transportation-related activity. Based on the environmental justice analyses, action shall be taken that avoids inequitable distribution of negative and positive externalities.

There are three main elements to FHWA's low-income and minority policy:

- Avoid, minimize or mitigate disproportionately high and adverse human health or environmental effects, including social and economic effects on minority and low-income populations.
- Ensure full and fair participation by all potentially affected communities in the transportation decision-making process.
- Prevent denial of, reduction in, or significant delay in the receipt of benefits by minority populations and low-income groups.

## **PUBLIC INVOLVEMENT PROCESS FOR LOW-INCOME AND MINORITY COMMUNITIES IN THE MTP**

SACOG's adopted guide for public involvement, the Public Participation Plan (PPP), identifies opportunities for public input at the front end of the planning process and prior to final hearings. The process provides complete information on transportation plans, timely public





notice, full public access to key decisions, and opportunities for early and continuing involvement in the process for all segments of the region's population, including low-income and minority communities. The full PPP is located in **Appendix E2**.

As part of the development process for the MTP2035, SACOG embarked on the most extensive MTP public outreach effort it has ever undertaken in this region. The goal of this outreach program was to obtain feedback from all segments of the population to ensure broad participation. SACOG worked with subcontractors, outreach organizations and community leaders to reach out to low-income and minority communities and identify transportation challenges and opportunities. Critical to SACOG's overall effort to reduce vehicle miles traveled (VMT) is understanding the choices residents of the region will want and need to make in the future. As such, public input from all segments of the population was critical to development of this MTP. Beyond meeting the federal requirement for addressing unique needs of low-income and minority communities, staff and the SACOG Board were sensitive to ensuring the transportation investments set forth in this MTP reflect a balance of diverse transportation choices representing the travel needs of the region's residents. The outreach activities were targeted to both specific minority groups and the general public as a whole. Key efforts included:

- **Presentations to over 200 community groups** during the two-year planning process;



- **Consultations with a number of groups** representing minority and low-income populations identified in **Appendix E4**;

- **Diverse participation** at the county workshops and regional *TALL Order Forum*;

- **Market research, including low-income and minority focus groups** and a statistically valid survey of transportation needs; and

- **Transportation needs for low-income communities** identified in the Public Transit-Human Services Transportation Plan were incorporated into the environmental justice planning process for the MTP.

For specific information related to the MTP spring 2006 community workshops, see **Appendix E3** MTP Dialogue Begins: Community Involvement Phases I & II. For complete information related to public input at the TALL Order: Moving the Region Forward forum, the Road Map to the Future televised town hall or the public opinion research, please see **Appendix E3** MTP Dialogue Continues: Community Involvement Phases III and IV.



## LOW-INCOME AND MINORITY GROUPS: CONCENTRATIONS AND CHARACTERISTICS

Low-income and minority areas are unique in terms of demographics, travel behavior and land use. The following sections summarize key characteristics of the low-income and minority communities in the region. Before describing the low-income and minority area characteristics, it is important to note:

- **MTP2035 does not forecast future low-income and minority locations**, so the areas that qualify as low-income and minority areas in 2005 are the same in the 2035 analysis.

- **Senior and disabled populations are not included in the FHWA low-income and minority definition**, and were consequently not included in the demographic analysis in this chapter. The transportation needs and opportunities to improve transportation services for these groups were, however, carefully considered in developing the MTP recommendations. Because senior and disabled populations share many of the same issues as low-income and ethnically diverse areas, they are included in the Equity and Choice discussion. SACOG also coordinated a Senior & Disabled Mobility Plan and Human Services Coordinated Plan during the MTP planning process.

### Demographics of the low-income and minority areas:

Figure 9-1 illustrates the locations of lower-income and ethnically diverse areas in the Sacramento region that meet the following low-income and ethnic diversity criteria:

- Census Block Groups where 40 percent or more of all households earn less than half the median income of the Metropolitan Statistical Area (MSA) in which they reside, based on 2000 Census data.

- Census Block Groups where 60 percent or more of the population is Asian Pacific Islander, African American, Hispanic, Native American or other Non-White ethnic group, based on 2000 Census data.

There are significant correlations between areas that have low-income and/or ethnically diverse populations. For the

purposes of this MTP, areas that meet one or both of the criteria listed above for low-income or minority areas, are considered Environmental Justice (EJ) Areas. The combined boundaries of the low-income and minority areas shown in Figure 9-1 indicate the EJ Analysis Areas in the SACOG region.

### Key Characteristics of low-income and minority communities include:

- Households and people in EJ Areas are more than two times as likely to be classified as low-income than people in other areas.

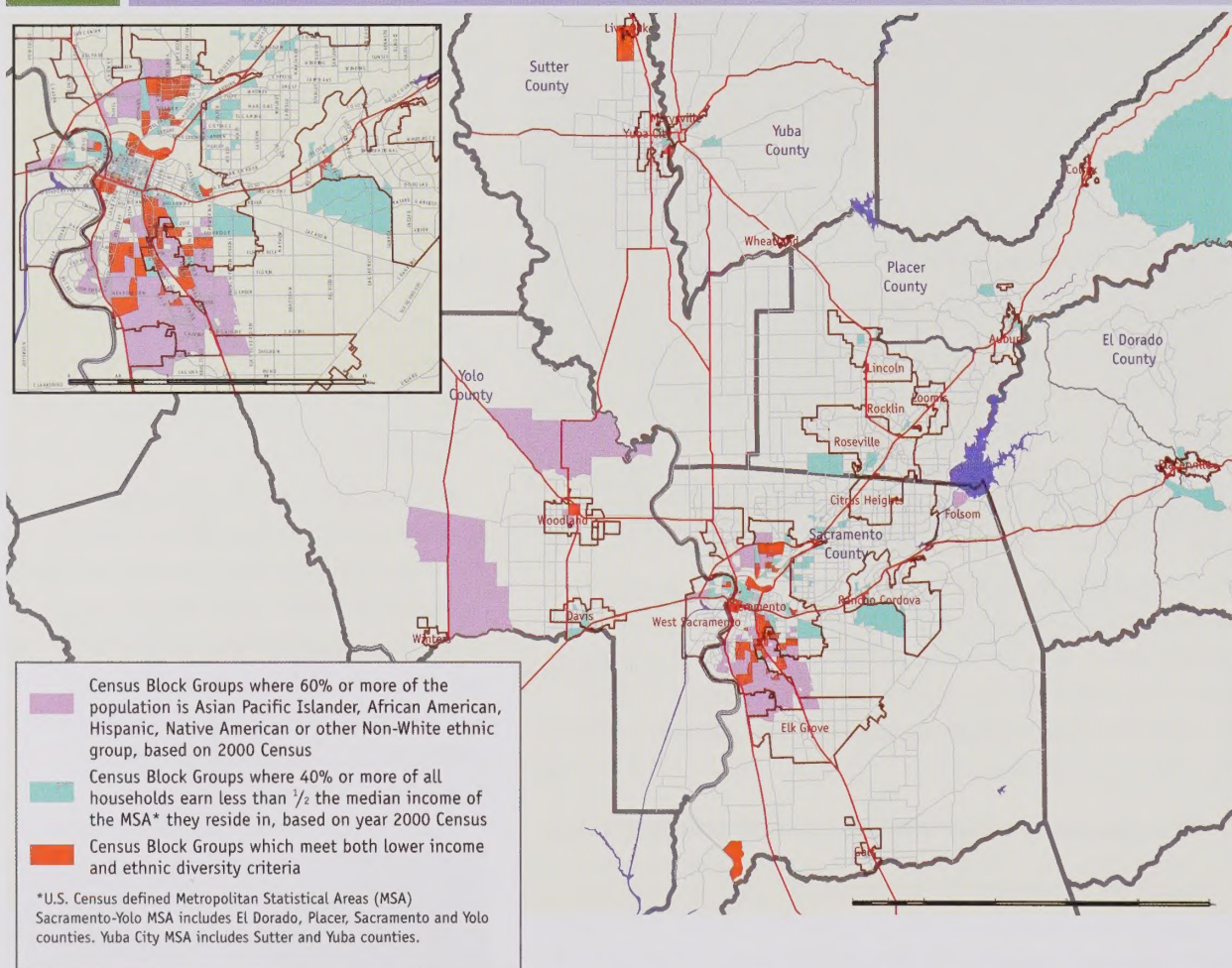
- EJ Areas tend to have a higher number of households that earn less than half the median household income compared to other areas. Regionally, about 31 percent of households in EJ Areas earn less than half the median household income compared to only about 18 percent in Non-EJ Areas (Table 9-1).





**FIGURE**  
**9-1**

## Lower Income or Ethnically Diverse Areas in the SACOG Region



Source: SACOG, August 2007, based on 2000 Census

■ EJ Areas frequently have larger minority populations than other areas. Regionally, minorities make up 59 percent of the population living in EJ Areas, while in Non-EJ Areas they account for 21 percent (Table 9-1).

### Travel pattern characteristics of Environmental Justice Areas include:

■ EJ Areas are often more dependent on transit and other alternative forms of transportation than Non-EJ Areas. While this is not necessarily true for each county, it is true for the region as a whole. Approximately 12 percent of the households in EJ Areas have no car available to them (versus 5.4 percent of Non-EJ Areas) and 8.2 percent of these households use an alternative form of transportation such as transit, bicycling or walking verses 4.5 percent in Non-EJ Areas (Table 9-1).



■ Generally, households in EJ Areas make fewer total trips and their travel distances are much shorter per trip than Non-EJ households. In terms of the type of transit used, EJ households comprise a higher share of bus versus rail ridership in the region.

■ Figure 9-2 reveals that existing transit serves EJ Areas fairly well, in general better than the regionwide average. Locations within these transit corridors are within a quarter mile of some form of public transportation.

EJ Areas are typically denser than the regional average—two-to-four times denser in residential areas and two-to-three times denser in employment areas (Table 9-2). Over the course of the MTP planning period, significant growth will occur in EJ Areas. A summary of the growth and likely impacts on EJ Areas are included in the section below titled, Analysis of Environmental Justice Community Impacts.

TABLE  
9-1

Basic Census Statistics for Environmental Justice Analysis Areas

|                                      | Persons Per Household | Workers Per Household | Households earning less than 1/2 Median Household Income | Transit Mode Share (Commute Only) | Bicycle and Walk Mode Share (Commute Only) | Households with no Vehicle Available | White | African American or Black | American Indian/Alaskan Native | Asian | Native Hawaiian/Other Pacific Islander | Other Race | Two or More Races | Hispanic or Latino |
|--------------------------------------|-----------------------|-----------------------|----------------------------------------------------------|-----------------------------------|--------------------------------------------|--------------------------------------|-------|---------------------------|--------------------------------|-------|----------------------------------------|------------|-------------------|--------------------|
| <b>El Dorado County (Part)</b>       |                       |                       |                                                          |                                   |                                            |                                      |       |                           |                                |       |                                        |            |                   |                    |
| Environmental Justice Analysis Areas | 2.0                   | 0.8                   | 41.7%                                                    | 0.7%                              | 1.7%                                       | 8.4%                                 | 87%   | 0%                        | 3%                             | 1%    | 0%                                     | 0%         | 3%                | 6%                 |
| Non-Environmental Justice Areas      | 2.7                   | 1.2                   | 16.3%                                                    | 1.3%                              | 1.5%                                       | 3.2%                                 | 88%   | 1%                        | 1%                             | 1%    | 0%                                     | 0%         | 2%                | 6%                 |
| <b>Placer County (Part)</b>          |                       |                       |                                                          |                                   |                                            |                                      |       |                           |                                |       |                                        |            |                   |                    |
| Environmental Justice Analysis Areas | 2.9                   | 1.2                   | 38.3%                                                    | 2.0%                              | 8.5%                                       | 17.2%                                | 47%   | 3%                        | 0%                             | 2%    | 0%                                     | 0%         | 2%                | 46%                |
| Non-Environmental Justice Areas      | 2.6                   | 1.2                   | 15.2%                                                    | 0.8%                              | 1.9%                                       | 4.8%                                 | 84%   | 1%                        | 1%                             | 3%    | 0%                                     | 0%         | 3%                | 9%                 |
| <b>Sacramento County</b>             |                       |                       |                                                          |                                   |                                            |                                      |       |                           |                                |       |                                        |            |                   |                    |
| Environmental Justice Analysis Areas | 2.8                   | 1.1                   | 30.5%                                                    | 4.0%                              | 3.3%                                       | 11.5%                                | 39%   | 15%                       | 1%                             | 17%   | 1%                                     | 0%         | 5%                | 22%                |
| Non-Environmental Justice Areas      | 2.5                   | 1.2                   | 17.6%                                                    | 2.3%                              | 2.5%                                       | 6.0%                                 | 77%   | 3%                        | 1%                             | 5%    | 0%                                     | 0%         | 4%                | 10%                |
| <b>Sutter County</b>                 |                       |                       |                                                          |                                   |                                            |                                      |       |                           |                                |       |                                        |            |                   |                    |
| Environmental Justice Analysis Areas | 3.0                   | 1.1                   | 23.8%                                                    | 0.4%                              | 2.1%                                       | 10.0%                                | 47%   | 2%                        | 1%                             | 14%   | 0%                                     | 0%         | 3%                | 31%                |
| Non-Environmental Justice Areas      | 2.7                   | 1.1                   | 18.0%                                                    | 0.8%                              | 2.4%                                       | 6.1%                                 | 72%   | 2%                        | 1%                             | 8%    | 0%                                     | 0%         | 4%                | 13%                |
| <b>Yolo County</b>                   |                       |                       |                                                          |                                   |                                            |                                      |       |                           |                                |       |                                        |            |                   |                    |
| Environmental Justice Analysis Areas | 2.8                   | 1.2                   | 35.5%                                                    | 3.4%                              | 13.1%                                      | 11.3%                                | 49%   | 2%                        | 1%                             | 10%   | 1%                                     | 0%         | 4%                | 34%                |
| Non-Environmental Justice Areas      | 2.6                   | 1.3                   | 19.5%                                                    | 4.1%                              | 8.8%                                       | 4.4%                                 | 72%   | 2%                        | 0%                             | 8%    | 0%                                     | 0%         | 4%                | 13%                |
| <b>Yuba County</b>                   |                       |                       |                                                          |                                   |                                            |                                      |       |                           |                                |       |                                        |            |                   |                    |
| Environmental Justice Analysis Areas | 3.0                   | 1.0                   | 35.5%                                                    | 1.2%                              | 3.5%                                       | 14.4%                                | 52%   | 3%                        | 2%                             | 14%   | 0%                                     | 0%         | 4%                | 24%                |
| Non-Environmental Justice Areas      | 2.8                   | 1.1                   | 20.7%                                                    | 0.4%                              | 2.4%                                       | 6.4%                                 | 75%   | 3%                        | 2%                             | 3%    | 0%                                     | 0%         | 4%                | 13%                |
| <b>Region</b>                        |                       |                       |                                                          |                                   |                                            |                                      |       |                           |                                |       |                                        |            |                   |                    |
| Environmental Justice Analysis Areas | 2.8                   | 1.1                   | 31.0%                                                    | 3.6%                              | 4.6%                                       | 11.5%                                | 41%   | 12%                       | 1%                             | 15%   | 1%                                     | 0%         | 5%                | 24%                |
| Non-Environmental Justice Areas      | 2.6                   | 1.2                   | 17.2%                                                    | 1.9%                              | 2.6%                                       | 5.4%                                 | 79%   | 2%                        | 1%                             | 4%    | 0%                                     | 0%         | 3%                | 10%                |

Source: SACOG, September 2007, based on 2000 Census





## Environmental Justice Issues

Beyond the quantitative assessment of EJ Area demographics and travel patterns, qualitative input revealed additional issues for consideration.

**Suburbs have limited low-income housing opportunities.** A large share of regional employment growth has been in the suburban areas, including lower-wage jobs. However, limited affordable housing options force some low-income residents in the urban core to travel far for jobs. Auto travel is required for reaching many of these jobs because transit options are especially limited in suburban and rural areas.

**EJ community members identified fixed-route transit gaps through MTP workshops, market research and corollary studies:**

- Insufficient service, especially midday, evenings, weekends, holidays, and in rural areas;
- Lack of fixed-route transit service connecting both where people live and their destinations;
- Long ride times, especially if there is a need to transfer;
- Bus stops far from destinations or with poor physical access;
- Increasing costs, especially with fare increases and transfers, a burden for low-income and minority households that often spend a larger share of their monthly income for transportation;

- Drivers not following rules and training concerning riders who are seniors or have disabilities;
- Insufficient transit information reaching the public;
- Lack of system integration across the geographic boundaries of providers, resulting in poor timing and schedule coordination, difficulty connecting for intercity travel, or necessity to make multiple transfers; and
- Poor rural transit options for low-income and minority communities.

**MTP workshop participants identified the following as issues that inhibit mobility with paratransit/dial-a-ride systems statewide:**

- Requirements for advance scheduling;
- Insufficient hours, capacity, and geographic areas served;
- Long waits for pick-ups;
- Difficulty of intercity connections; and





TABLE  
9-2

Land Use Characteristics of Environmental Justice Analysis Areas<sup>1</sup>

|                                   | Population vs. Jobs in Environmental Justice Areas |                                | Households Per Developed Residential Acre |              | Jobs Per Developed Non-Residential Acre |             |
|-----------------------------------|----------------------------------------------------|--------------------------------|-------------------------------------------|--------------|-----------------------------------------|-------------|
|                                   | Percentage of population in EJ areas               | Percentage of jobs in EJ areas | EJ Areas                                  | Non-EJ Areas | EJ Areas                                | Non-EJ Area |
| El Dorado County (Part)           | 2.72%                                              | 6.73%                          | 0.6                                       | 0.3          | 8.6                                     | 8.9         |
| Placer County (Part) <sup>2</sup> | 6.95%                                              | 9.71%                          | 3.4                                       | 1.7          | 16.5                                    | 10.3        |
| Sacramento County                 | 24.09%                                             | 37.55%                         | 7.5                                       | 4.5          | 23.6                                    | 11.6        |
| Sutter County                     | 11.13%                                             | 21.95%                         | 5.8                                       | 2.4          | 13.4                                    | 5.4         |
| Yolo County                       | 21.35%                                             | 28.47%                         | 8.7                                       | 5.3          | 10.8                                    | 7.5         |
| Yuba County                       | 6.04%                                              | 0.88%                          | 4.0                                       | 0.6          | 5.2                                     | 0.8         |
| Region                            | 19.01%                                             | 30.24%                         | 6.2                                       | 1.7          | 20.4                                    | 7.6         |

Source: SACOG, August 2007

Notes:

<sup>1</sup> All land use statistics from PLACE'S Year 2005 Existing Condition Scenarios

<sup>2</sup> PLACE'S estimates for Placer County Environmental Justice Analysis Areas are still under review at the time of publishing for MTP2035

- Curb-to-curb service insufficient for those who need additional help to/from the vehicle or to carry packages.

**Reaching medical appointments is consistently mentioned as a critical concern for those who must rely on public transit or demand-responsive services.**

Research completed for the Senior & Disabled Mobility Plan shows the problem varies greatly across the region. Issues identified with existing transportation services include:

- Those needing to reach medical facilities in another city or county can encounter difficulties trying to cross geographic boundaries, especially where eligibility requirements for specialized transit service differ;
- Most demand-responsive services require advance reservations, making it difficult to reach a doctor for a same-day appointment because of an illness, urgent care or emergency;
- It is hard to predict how long a medical appointment will last, so it is difficult to schedule a timely pick-up;

- Waits for pick-up can be long and generally difficult for someone in ill health;

- Transit agency demand-responsive programs, which are all curb-to-curb, require clients to wait outside for a pick-up, and if they are late it can be a particular hardship for someone who is frail or ill, especially in hot, cold, or wet weather;

- Some people are too frail to use curb-to-curb service, and require greater assistance to and from the vehicle;

- Seniors with dementia can be too confused to successfully reach an appointment without escort;

- Van transportation itself can exacerbate certain medical conditions;

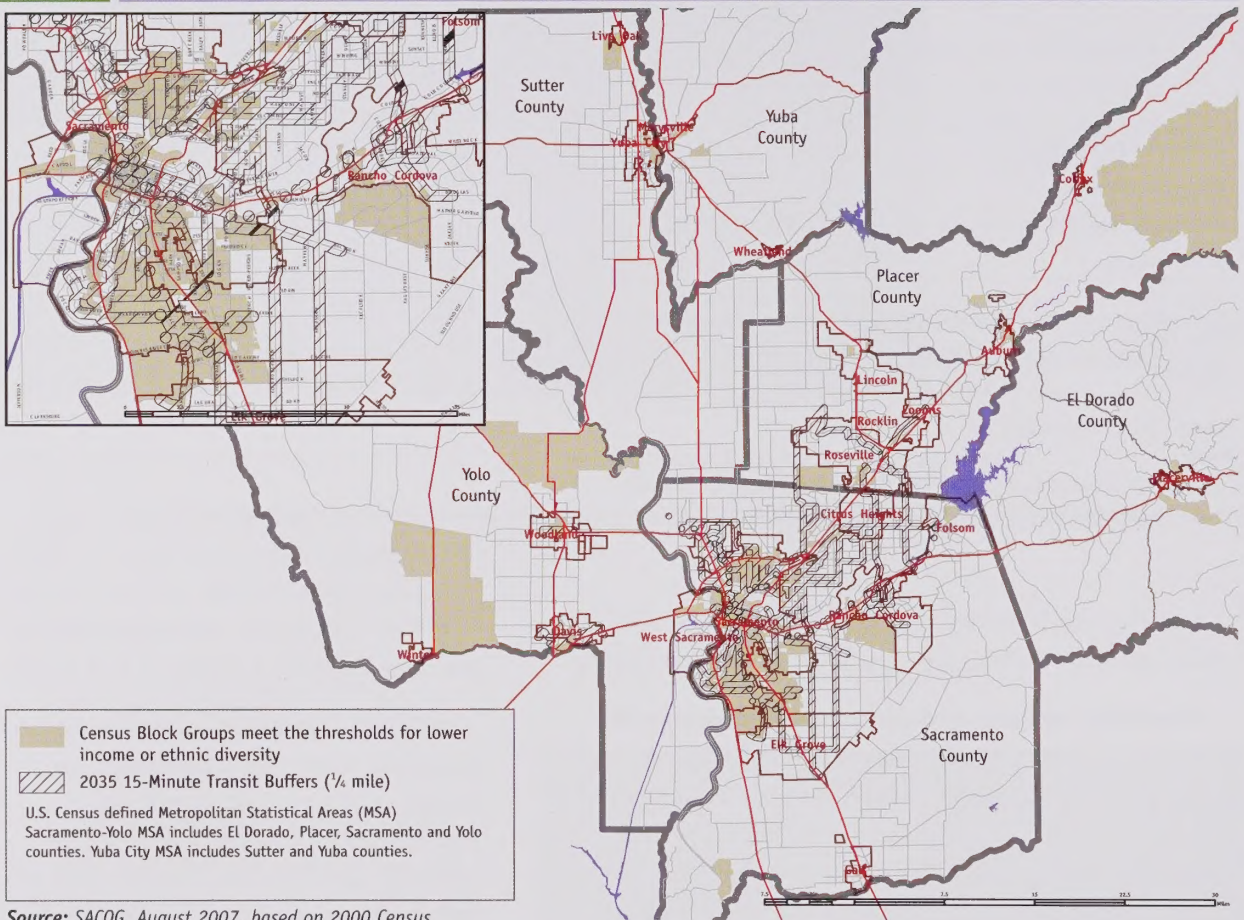
- Demand for demand-responsive services especially by dialysis clients





**FIGURE**  
**9-3**

## Environmental Justice Analysis Areas with 2035 15-Minute Transit Buffers in the SACOG Region



*Source: SACOG, August 2007, based on 2000 Census*

keeps growing, decreasing capacity for other users; and

- Schedules are not always coordinated between agencies for route connections to reach medical centers.

### **Analysis of Environmental Justice Community Impacts**

The projects contained in the MTP2035 increase accessibility and address existing problems with the transportation network. Since these projects are dispersed

throughout the region and are designed to improve transportation facilities where they are needed most, the projects are not expected to disproportionately affect low-income communities in an adverse way. In many cases—transit service upgrades, for example—MTP projects disproportionately benefit EJ communities.

### **TRANSIT**

**Because EJ Communities tend to be more reliant upon transit service than other segments of the population, those projects included in the MTP2035 that add new or improve existing transit service were consis-**



**TABLE  
9-3**

**Year 2005, 2018 and 2035 Draft MTP Transit Proximity for  
Environmental Justice and Non-Environmental Justice Areas**

| County / Year                     | Environmental Justice Areas |                                                                |                                                                | Non-Environmental Justice Areas |                                                                             |                                                                | Total               |
|-----------------------------------|-----------------------------|----------------------------------------------------------------|----------------------------------------------------------------|---------------------------------|-----------------------------------------------------------------------------|----------------------------------------------------------------|---------------------|
|                                   | Total<br>Population         | Population<br>within 1/4 mile<br>of 15-minute<br>Transit Lines | Percentage<br>within 1/4 mile<br>of 15-minute<br>Transit Lines | Total<br>Population             | Population<br>within 1/4 mile<br>of 15-minute<br>Transit Lines <sup>4</sup> | Percentage<br>within 1/4 mile<br>of 15-minute<br>Transit Lines | Total<br>Population |
| <b>2005<sup>1</sup></b>           |                             |                                                                |                                                                |                                 |                                                                             |                                                                |                     |
| El Dorado County                  | 4,009                       | 0                                                              | 0.0%                                                           | 150,419                         | 0                                                                           | 0.0%                                                           | 154,428             |
| Placer County                     | 20,003                      | 0                                                              | 0.0%                                                           | 279,867                         | 0                                                                           | 0.0%                                                           | 299,870             |
| Sacramento County                 | 343,588                     | 75,308                                                         | 21.9%                                                          | 939,814                         | 12,972                                                                      | 1.4%                                                           | 1,283,402           |
| Sutter County                     | 10,621                      | 0                                                              | 0.0%                                                           | 70,602                          | 0                                                                           | 0.0%                                                           | 81,223              |
| Yolo County                       | 40,828                      | 4,745                                                          | 11.6%                                                          | 132,072                         | 519                                                                         | 0.4%                                                           | 172,900             |
| Yuba County                       | 4,296                       | 0                                                              | 0.0%                                                           | 61,124                          | 0                                                                           | 0.0%                                                           | 65,420              |
| Region                            | 423,345                     | 80,053                                                         | 18.9%                                                          | 1,633,898                       | 13,491                                                                      | 0.8%                                                           | 2,057,243           |
| <b>2018 Draft MTP<sup>2</sup></b> |                             |                                                                |                                                                |                                 |                                                                             |                                                                |                     |
| El Dorado County                  | 4,102                       | 0                                                              | 0.0%                                                           | 190,730                         | 0                                                                           | 0.0%                                                           | 194,832             |
| Placer County                     | 29,700                      | 0                                                              | 0.0%                                                           | 394,739                         | 0                                                                           | 0.0%                                                           | 424,439             |
| Sacramento County                 | 371,435                     | 132,459                                                        | 35.7%                                                          | 1,217,850                       | 110,037                                                                     | 9.0%                                                           | 1,589,285           |
| Sutter County                     | 10,876                      | 0                                                              | 0.0%                                                           | 99,260                          | 0                                                                           | 0.0%                                                           | 110,136             |
| Yolo County                       | 40,179                      | 8,038                                                          | 20.0%                                                          | 179,891                         | 1,068                                                                       | 0.6%                                                           | 220,070             |
| Yuba County                       | 5,545                       | 0                                                              | 0.0%                                                           | 102,232                         | 0                                                                           | 0.0%                                                           | 107,777             |
| Region                            | 461,837                     | 140,497                                                        | 30.4%                                                          | 2,184,702                       | 111,105                                                                     | 5.1%                                                           | 2,646,539           |
| <b>2035 Draft MTP<sup>3</sup></b> |                             |                                                                |                                                                |                                 |                                                                             |                                                                |                     |
| El Dorado County                  | 6,501                       | 0                                                              | 0.0%                                                           | 218,531                         | 0                                                                           | 0.0%                                                           | 225,032             |
| Placer County                     | 32,975                      | 3,815                                                          | 11.6%                                                          | 537,624                         | 5,879                                                                       | 1.1%                                                           | 570,599             |
| Sacramento County                 | 458,838                     | 264,944                                                        | 57.7%                                                          | 1,525,129                       | 159,076                                                                     | 10.4%                                                          | 1,983,967           |
| Sutter County                     | 12,528                      | 0                                                              | 0.0%                                                           | 123,034                         | 0                                                                           | 0.0%                                                           | 135,562             |
| Yolo                              | 50,937                      | 14,713                                                         | 28.9%                                                          | 228,235                         | 1,830                                                                       | 0.8%                                                           | 279,172             |
| Yuba                              | 6,501                       | 0                                                              | 0.0%                                                           | 147,808                         | 0                                                                           | 0.0%                                                           | 154,309             |
| Region                            | 568,279                     | 283,472                                                        | 49.9%                                                          | 2,780,362                       | 166,784                                                                     | 6.0%                                                           | 3,348,641           |

**Source:** SACOG, December 2007

**Notes:**

<sup>1</sup> Year 2005 population estimates from PLACE<sup>3</sup>S base year scenario

<sup>2</sup> Years 2018, 2035 population estimates from PLACE<sup>3</sup>S October 2007 SACOG-Board-adopted growth allocation

<sup>3</sup> This column represents estimates of population residing within 1/4 mile of a transit line with 15-minute-or-better service headways (i.e., four-or-more buses per hour)



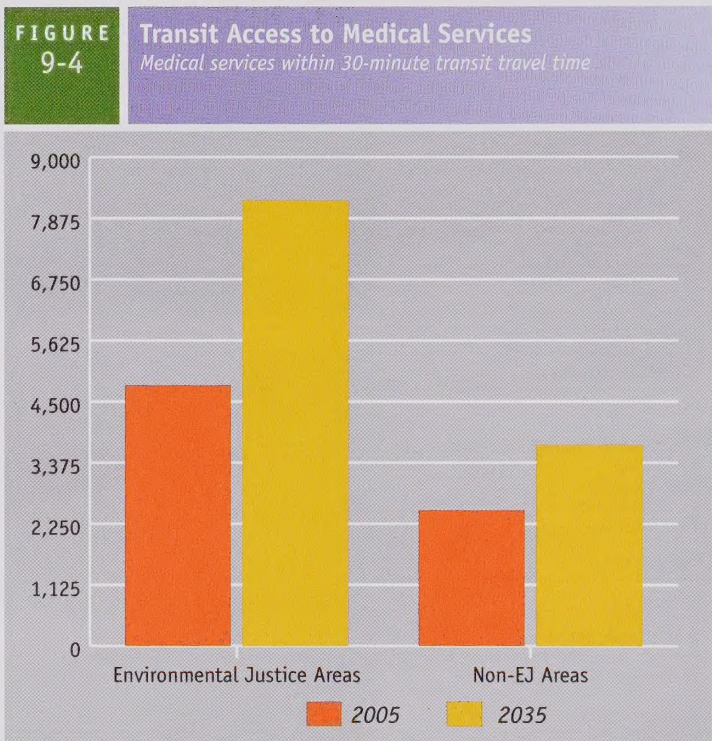


tently the highest priorities identified. The MTP2035 increases investment in transit services by 21 percent from existing MTP levels.

**Bus and rail service hours increase by 150 percent between 2005 and 2035,** allowing service frequencies to improve on existing and new routes. An examination of frequency improvements reveals that 55 of the 203 total bus routes (27 percent) in 2035 provide a 15-minute or greater peak-period frequency verses 12 of the 178 (7 percent) in 2005. As illustrated in Figure 9-3, a large share of the new transit route miles are in EJ communities.

**There are limited high-frequency transit corridors in 2005 both inside and outside of EJ Analysis Areas.** In total, slightly less than one-in-five people in EJ Areas live within ¼ mile of a high-frequency transit route, and less than one-in-100 people in Non-EJ Areas.

**The extent of high-frequency transit routes is vastly increased inside (and outside) of the EJ Analysis Areas. However, with MTP2035 funding levels, EJ Areas receive greater accessibility to new and improved high-quality transit services compared to Non-EJ Areas** (Table 9-3). For the analysis, high-quality transit accessibility is considered living within ¼ mile of a high-frequency (headway of 15-minutes or less) transit line. High-frequency routes are added to South Sacramento, including Meadowview Road, Mack Road, 24th Street, Franklin Boulevard, and other streets. The North Sacramento low-income and minority areas of Northgate Boulevard,



Source: SACOG, August 2007



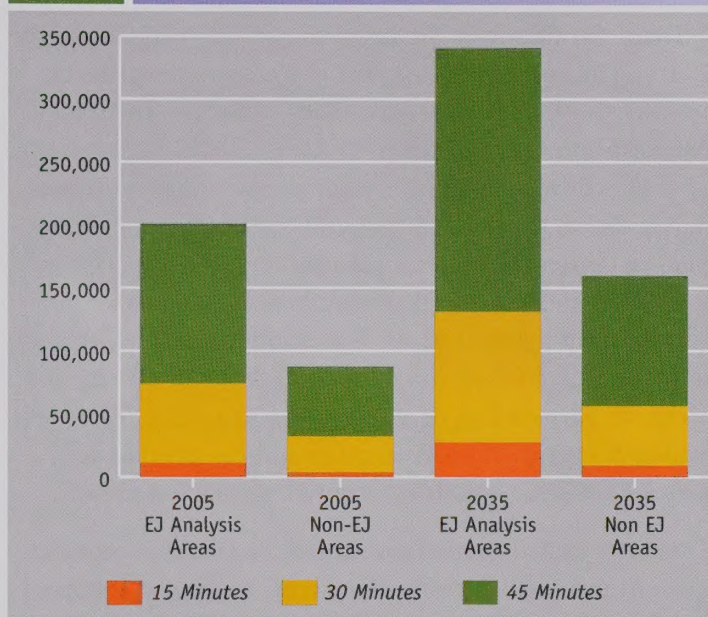
Source: SACOG, August 2007



**FIGURE 9-6**

## Transit Access to Jobs

*Jobs accessible with transit travel times of 15, 30 and 45 minutes*



Source: SACOG, August 2007

Norwood Avenue, San Juan Road, and Del Paso Boulevard all get high-frequency bus service in MTP2035, compared to virtually zero high-frequency transit service in 2005.

In comparison to overall changes in population growth in EJ and Non-EJ Areas in 2035, EJ Areas get 11 percent of population growth, but 57 percent of the increase in population within  $\frac{1}{4}$  mile of high-frequency transit. **By 2035, one-in-two people in EJ Areas live within  $\frac{1}{4}$  mile of high frequency transit versus one-in-17 people in Non-EJ Areas.**

**The MTP2035 supports more options for transit-dependent citizens.** Residents in EJ Areas benefit greatly from any increase in transit investment because they rely on public transportation in higher numbers than residents in other areas. EJ households are also more likely to be without an automobile compared to other groups, so greater transit accessibility is especially important.

A transit system that does not favor commute travel at the expense of midday travel is important to the transit

dependent. As a result, the 2035 transit investments in the MTP include midday transit frequency improvements that will serve EJ communities that include the elderly and workers with non-traditional hours. Access to important services, such as medical services and retail job opportunities, improves with investments made in the MTP2035 as demonstrated in Figures 9-4 and 9-5.

**The access to jobs within 15-minute transit travel time more than doubles in EJ Analysis Areas between 2005 and 2035. The access to jobs within 30 minutes and 45 minutes of transit travel time increases by approximately 60 percent (Figure 9-6).**

Reducing transfers is also important to the transit dependent who seek a trip that is comparable to the time it would take to drive. The number of transfers will continue to largely depend on the distance traveled, but with the new land use pattern in 2035 changing to better reflect smart growth principles, many trips will be shorter because of compact and mixed land uses. For those longer transit trips that do require a transfer, the significantly increased frequency of service along most routes results in improved “timed transfers” (shorter waiting times), and ultimately a faster transit trip.

**MTP2035 includes new transit options that can serve EJ Areas. These new options include services for both short-distance and medium-to-long-distance trips.**

For shorter trips, the increase in shuttle services can improve access to





longer distance bus and rail options. New shuttle services benefit all residents, but the greatest benefit for EJ communities comes from improved service targeting local trips to shopping, medical facilities and other public services.

For longer distance trips, a network of bus rapid transit (BRT)/enhanced bus corridors in MTP2035 benefits EJ communities. These services are limited-stop buses that run frequently all day to connect major activity centers. Many higher-density areas become “activity centers” by 2035 that contain a large share of the new jobs, shopping, and medical facilities. The MTP connects these new activity centers with 12 proposed bus rapid transit corridors. While all routes provide regionwide benefits, corridors directly serving EJ communities include service along Florin Road connecting South Sacramento residents to the large job center in Rancho Cordova. Other relevant corridors include lines along Stockton Boulevard; Watt Avenue and Sunrise Boulevard that connect activity centers to neighborhoods with poor connections today.

## ROADS

**In contrast to the larger increase in transit investment from the existing MTP, the MTP2035 has a 2 percent increase in road capacity investments from MTP levels. This funding shift allows for increased funding support for road maintenance (17 percent increase), bicycle/pedestrian (56 percent increase), and other program investments (35 percent increase).**

**The MTP2035 road projects are located throughout the region and are not disproportionately concentrated in EJ Areas.**

Figure 9-7 illustrates the key road projects overlaid on the EJ Areas, illustrating that a lower share of road expansion projects run through EJ communities. However, the road expansion projects that are in EJ Areas tend to be larger regional roadways with potentially greater impacts. This is largely due to the fact that many EJ Areas are older communities in denser urban areas adjacent to existing transportation routes and facilities that were built long ago and are now used for regional travel. For example, I-5, I-80, U.S. 50 and State Route 99, all run through EJ Areas in the city and county of Sacramento. As regional facilities, many of these roadways require improvements to address existing deficiencies and accommodate projected population growth.

SACOG measures road investment impacts at a regional scale. At this regional scale of analysis, the impacts demonstrate significant performance benefits from the existing MTP level. The new projected land use pattern, along with

**FIGURE 9-8**

### Auto Access to Jobs

*Jobs accessible with transit travel times of 15, 30 and 45 minutes*

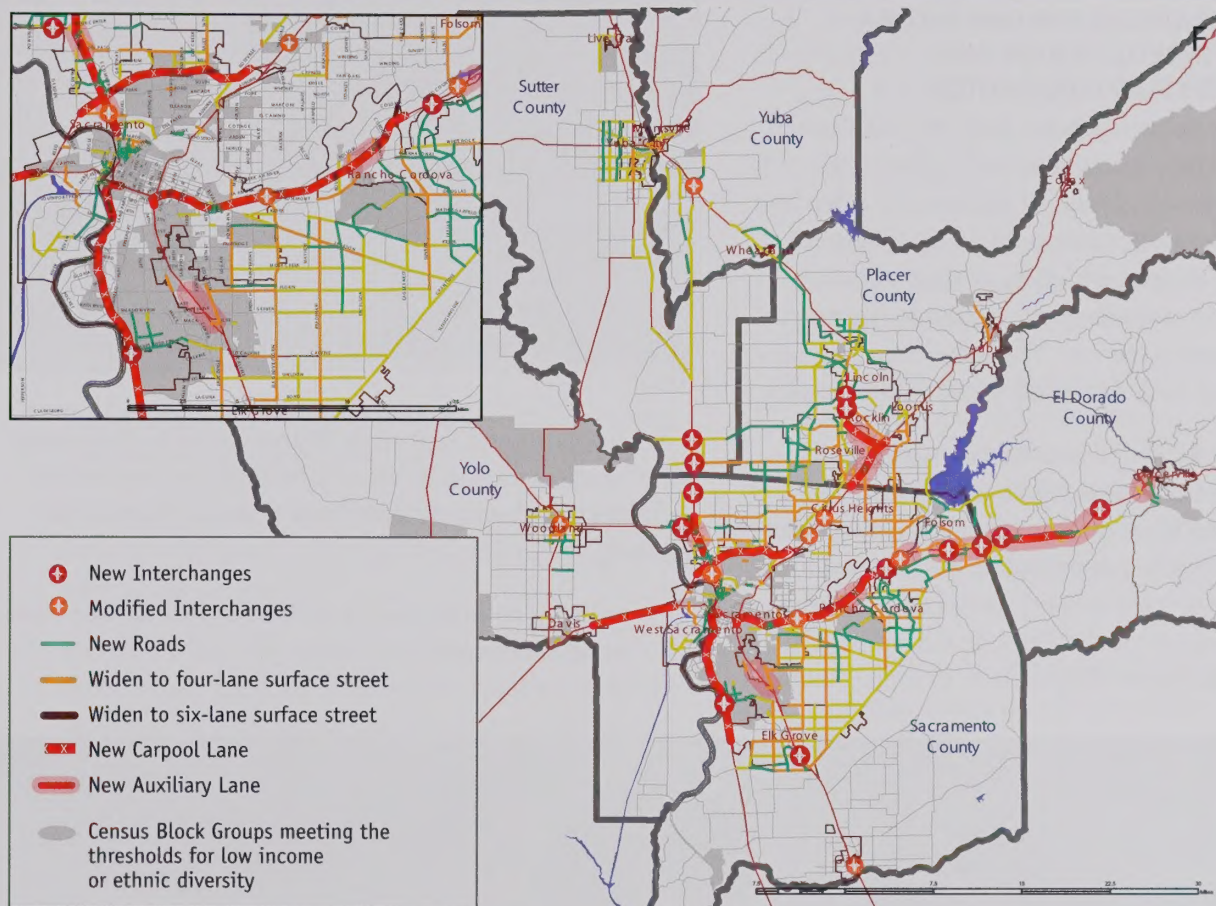


Source: SACOG, August 2007



**FIGURE 9-7**

# Environmental Justice Analysis Areas with 2035 MTP Network Changes in the SACOG Region



Source: SACOG, August 2007

the supportive road and transit projects in the MTP2035 result in shorter trips and reduced VMT. **The number of jobs accessible within 15 minutes for residents of EJ Areas increases by over 30 percent for a 15-minute commute; over 60 percent for a 30-minute commute; and by over 70 percent for a 45-minute commute** (Figure 9-8). EJ communities also directly benefit from the resulting improvements in air quality and travel choices.

Local agencies must prepare a finer-grained, local impact analysis of road investments through project-level environmental impact reports when implementing MTP

projects. These analyses will include investigations into impacts such as noise, air quality and traffic that may require mitigation measures.

Negative local impacts from road projects on EJ communities can be reduced through community-supportive improvements, including soundwalls, transit-stop amenities, and improved sidewalk networks possible through the 56 percent increase in bicycle and pedestrian



funding and 35 percent increase for other supporting programs.

### **STRATEGIES FOR LOW-INCOME, MINORITY, SENIOR AND DISABLED COMMUNITIES**

Public agencies such as SACOG need to pay special attention to the needs of EJ areas. Residents of EJ areas are often less knowledgeable and involved, because of language barriers or cultural isolation, and have fewer options because of limited income. The following categories can help overcome these disadvantages:

- SACOG should maintain specific outreach and public information activities described in its Public Participation Plan (PPP) to ensure public engagement and awareness around transportation issues, capture public input on current issues, determine effectiveness in representing

the needs of the region's residents including the EJ communities, and reexamine its PPP annually to identify the most effective means for engaging people from EJ groups.

- Project-specific environmental and engineering work should specifically consider local impacts of project locations, size, and design in relation to EJ Areas and try to avoid or mitigate impacts that could divide or affect the quality of life in those communities.

- Project-level environmental analysis should specifically examine local air quality impacts on EJ communities, since low-income areas are often found near freeways, and air toxins tend to be more of a local than regional-scale concern.

- SACOG should look to its Human Services Transportation Coordinated Plan to identify funding and implement strategies that can particularly help EJ Areas, such as the following:

- Improve coordination of transit services between area transit operators;







- Implement the Universal Fare Card to enable easier and faster transfers between area transit systems;
- Expand 511 transit trip planning to include all fixed-route transit operators within the region, for those with computer access;
- Develop a process to provide advance notice to other transit agencies and the public about proposed service cuts, revisions, route changes or expansions;
- Improve regional coordination between various demand-responsive service providers, including social service agencies, and seek to work out arrangements to share and simplify use of what are now specific, separate services;
- Review opportunities with other demand-responsive and nonprofit providers to use existing vehicles for multiple-program clients;
- Create a regional effort to improve public transit and supplemental transportation services for medical appointments, including on-site escort services at medical facilities and priority parking for dial-a-ride vehicles at key medical, shopping, and employment centers;
- Collaborate on a program of “transit scrip” to enable seniors and low-income persons with disabilities to

reach fixed-route transit services via a connection by taxi, volunteer driver, or community organization;

- Arrange for community-based volunteers to audit conditions at bus stop teams to audit conditions at bus stops and stations to identify opportunities to improve access, amenities, safety, and crossing times at key intersections using federal guidelines for the pace of older and disabled persons;
- Develop an Adopt-a-Stop bus stop enhancement program to encourage nearby developers and private and nonprofit organizations to help maintain, beautify, and add amenities at bus stops and nearby sidewalks;
- Establish volunteer driver programs through which people can share the monthly cost for a regular driver and receive personalized transportation service when desired;
- Offer mobility training programs for those unfamiliar with transit options and how to use them effectively; and
- Train transit drivers concerning rules and practices for transporting senior and persons with various forms of disability.

Additional strategies are identified in Appendix C5.





C H A P T E R 1 0

# Economic Vitality



EFFICIENTLY CONNECT

PEOPLE TO JOBS AND

GET GOODS TO MARKET



Transportation relates to the economic vitality of the Sacramento region in two fundamental ways—how people commute to work, and how goods are transported through and within the region.

## COMMUTING TO WORK

### *Commute Patterns Today and Tomorrow*

**Home-to-work commuting comprises only 22 percent of all trips made in the region, but these trips are important economically and in their peak period impact on the transportation system.** One way to look at commuting is to understand that it adds about a third more trips on top of the general background of urban travel during the two peak periods 6 to 9 a.m. and 3 to 6 p.m. Commute trips tend to be lengthier and use freeways and major arterials more, intensifying their effect on the regional system. Although only 22 percent of all resident person trips are part of a commute to or from work, commuting accounts for nearly 30 percent of all vehicle trips and 47 percent of all resident vehicle miles of travel.

**The main commute factor is that, for most people, the commute trip is the longest trip of the day, but in reality most commute trips are shorter than media attention on extra-long commutes would imply:**

- Overall average commute trip length is 12.5 miles;
- One-third of workers live in the same community area where they work, and their commute trips average less than 5 miles;
- 75 percent of commute trips are shorter than 15 miles, and 90 percent are shorter than 25 miles;
- 5 percent of commute trips are 35 miles or longer; and
- Approximately 4 percent of workers have no commute—they work at home.

**Most of those who live near the northern or eastern urban edge work in Rancho Cordova, Roseville, or other**

**nearby suburban areas, while those who live in the inner suburbs commute to all three job centers. For example:**

■ More than one-half of downtown Sacramento commuters come from close adjacent areas: southern Sacramento, eastern Sacramento County area, northern Sacramento, Natomas, and West Sacramento;

■ 8,000 workers commute from Natomas into downtown Sacramento, while 14,000 workers commute to jobs in Natomas from areas further east or north;

■ Two-thirds of workers who live in Folsom/El Dorado Hills commute no further west than Rancho Cordova; and

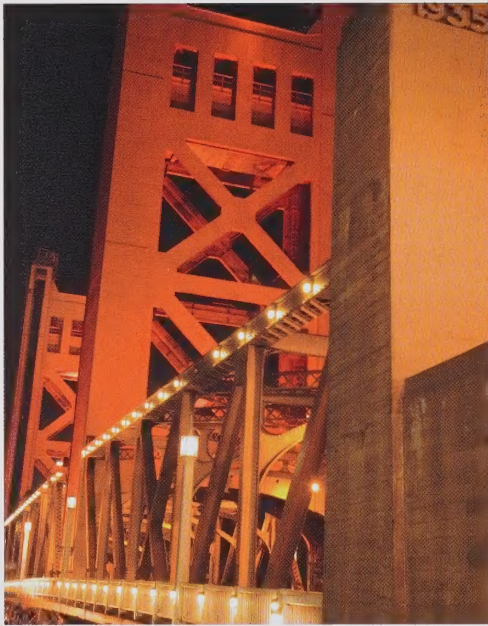
■ Two-thirds of workers in Placer County commute no further west or south than Citrus Heights, Arden or Carmichael.

**One key factor in commute patterns is the need by 2035 to get about 150,000 workers into and back from downtown Sacramento.** This central city commute pattern, common in most large urban regions around the country, presents a peak capacity challenge to the core of both the region's highway and transit systems.

■ The growth pattern through 2035 focuses on aggressive housing growth in the downtown, while adding sufficient employment to retain the area as the central employment center for the region. Thus, the growth increment through 2035 has a 1.6 jobs-to-housing ratio, bringing the end-state ratio in 2035 down to 6 jobs per housing unit (compared to 9 jobs per household today).







■ These significant land use changes greatly increase the number of downtown workers who can take short walk, bike or transit trips to work, but many workers still will commute to work in downtown Sacramento in 2035. There will also be more people who travel from throughout the region to the existing and future cultural attractions typical of the downtown of a region's largest city. Providing good transportation access in and out of a healthy downtown in a metropolitan area is always one of the central challenges of a metropolitan transportation plan.

**A second key factor in commute patterns is river crossings. The American River is a geographic barrier across the urban area, which is exacerbated by a structural imbalance in jobs and housing. There are approximately 70,000 more jobs than workers south of the American River.**

In fact, because of choices related to balancing of desired housing, earning potential, schools, and many other factors, more than 200,000 workers, almost 25 percent of the workforce, actually do commute across the river daily. That number is expected to grow to 285,000 by 2035.

■ The largest shares of the increase in cross-American River commute flows will occur between Natomas/northern Sacramento and downtown Sacramento.

■ With minimal added capacity across the American River, workers living in the Arden/Carmichael/Fair Oaks/Oran-gevale areas shift away from downtown Sacramento, which decreases some travel demand crossing close to downtown. However, that shift is more than balanced out by increasing travel to Rancho Cordova, Folsom, and El Dorado Hills on more easterly crossings.

■ Workers crossing the Sacramento River will increase from about 60,000 to over 100,000 between 2005 and 2035, with most of the increase flowing between West Sacramento and the central areas of Sacramento.

**A third key factor in commute patterns is the critical role of U.S. 50 as an economic corridor—440,000 jobs today and 710,000 in 2035 (46 percent of the region's jobs) lie along the corridor.** Many of these workers use the freeway for part of their commute, and U.S. 50 is also the key freeway for commercial trips within the region.

■ U.S. 50 runs full in both directions during peak hours morning and afternoon, one of the very few freeways in the region that does so. In fact, as of 2006, morning peak traffic outbound toward Rancho Cordova slightly exceeds traffic inbound toward downtown Sacramento.

■ By 2035, the I-80/Route 65 corridor—Natomas-northern Sacramento-Roseville-Lincoln—begins to look similar to U.S. 50 as a second key economic activity corridor, for both jobs (500,000 jobs along the corridor) and commercial trips.



**A fourth key factor in commute patterns is the continuing growth of Rancho Cordova and Roseville as edge cities, with strong jobs and housing growth.**

Commuting into both Rancho Cordova and Roseville increases by 76,000, verifying their place among the region's three main job centers. This leads to a tiered commute pattern.

About 65 percent of downtown Sacramento commuters come from close adjacent areas—southern Sacramento, eastern Sacramento County, northern Sacramento, Natomas, western Sacramento—and jobs in those areas in turn must be filled by commuters from areas further out. Most of those who live near the northern or eastern urban edge work in Rancho Cordova, Roseville or other nearby suburban areas, while those who live in the inner suburbs commute in all directions, to all three job centers.

- In Rancho Cordova, 45 percent of its new jobs are expected to be filled by resident workers in Rancho Cordova. The remaining 55 percent primarily travel in from the Vineyard area, areas of southeastern Sacramento County, Folsom and El Dorado Hills.

- About one-third of the new jobs in Roseville are expected to be filled by resident workers in Roseville. The remaining two-thirds travel in from the Lincoln/Rocklin/Granite Bay area, and from areas in northern Sacramento County.



- Commute patterns and economic interactions strengthen between Roseville and Rocklin/Lincoln and between Rancho Cordova and Folsom/El Dorado Hills, with growing commutes both ways.

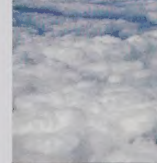
- 70 percent of workers who live in Folsom/El Dorado Hills commute no further west than Rancho Cordova or eastern Sacramento county, and 70 percent from Lincoln and Rocklin commute no further south than Roseville, northern Sacramento or Citrus Heights.

**A fifth key factor in commute patterns is a noticeable change in the heaviest one-way commutes between community areas from 2005 to 2035, pointing out corridors that need new capacity looking ahead.**

- Figure 10-1 shows eight activity centers in 2005 with major one-way commute corridors with greater than 10,000 vehicles per day.

- Figure 10-2 shows shows 13 activity centers by 2035 where major one-way commute corridors are projected to be greater than 10,000 vehicles per day. The map also illustrates an increase in travel between suburban activity centers.

- Eastern Sacramento County, northern Sacramento, southern Sacramento, and eastern Sacramento contain nine of the eleven areas with the highest number of outbound commuters in 2005. However, none of these four areas are expected to experience much commuter growth in the future. It would be appropriate to assume that congestion levels out of these areas today will stay relatively constant to 2035.



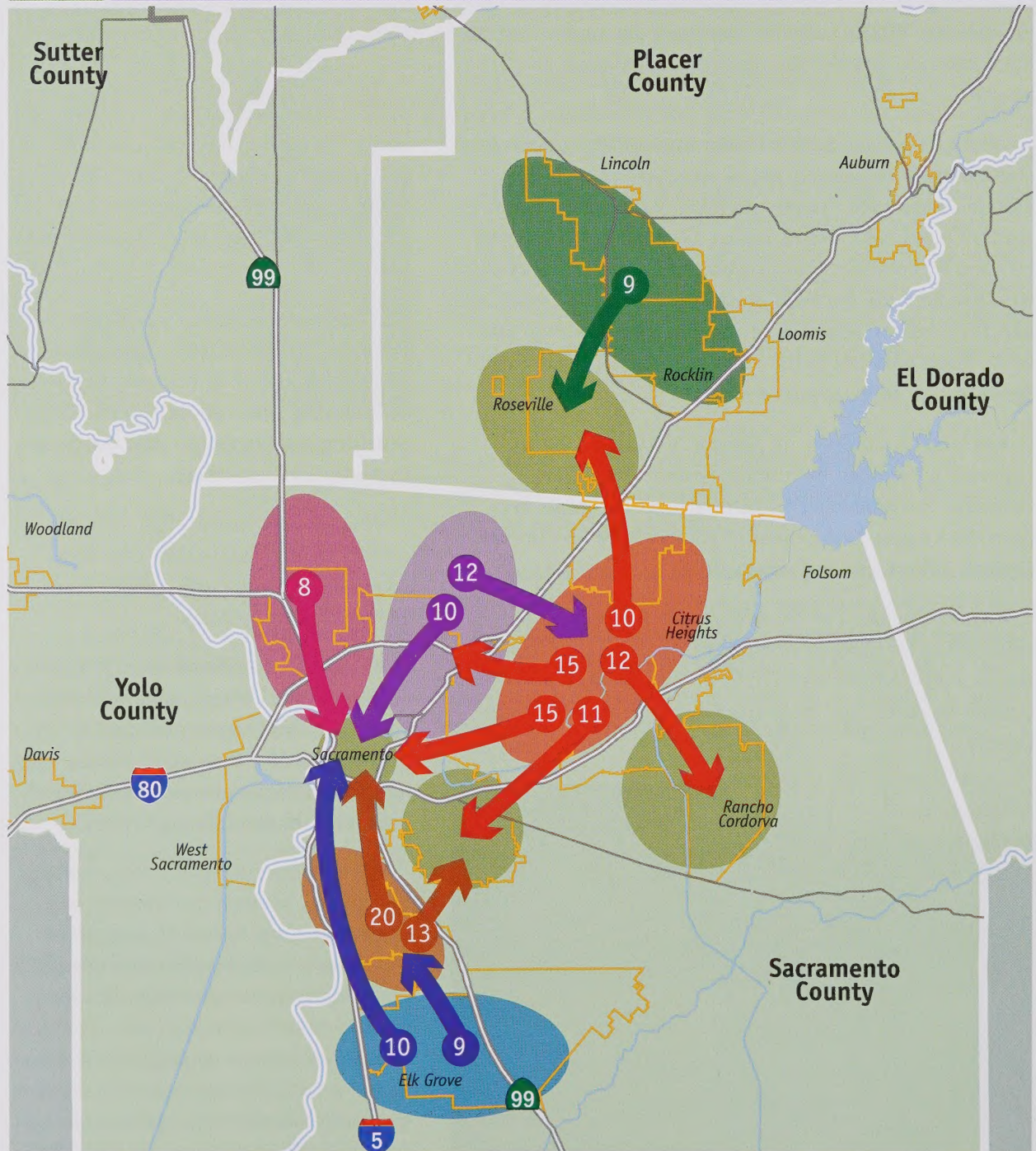


**FIGURE**  
**10-1**

# **2005 Main Commute Corridors**

*Weekday Commuter Traffic (in 1,000s)*

*Shown are traffic flows greater than 8,000 per day*



Source: SACOG, July 2008

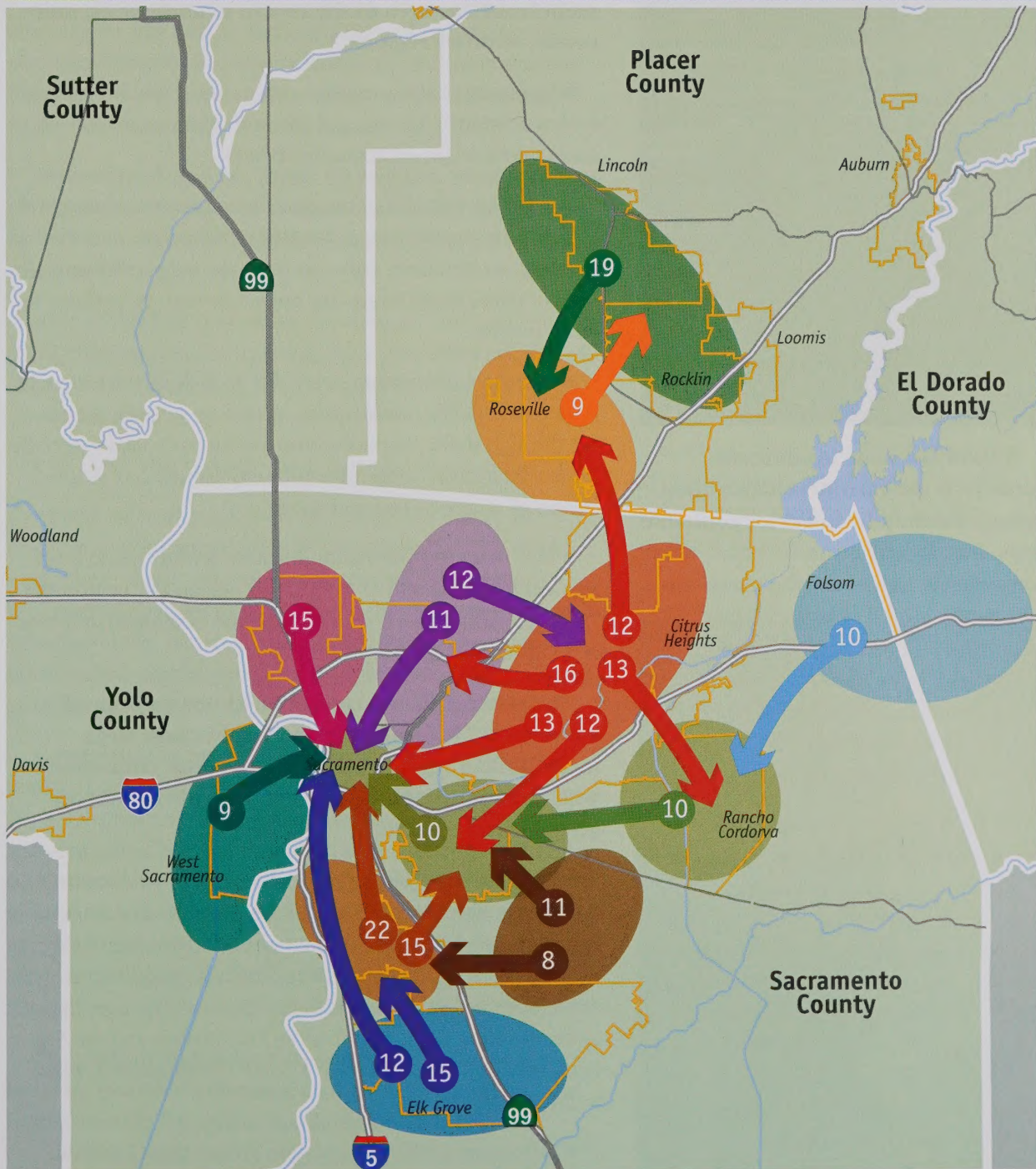


**FIGURE**  
**10-2**

## 2035 Main Commute Corridors

Weekday Commuter Traffic (in 1,000s)

Shown are traffic flows greater than 8,000 per day



Source: SACOG, July 2008





**A sixth key issue in commute patterns is the current reliance upon private automobile travel for commute trips.** During peak commute hours, when congestion is highest and the transportation system is used at greatest capacity, 92 percent of person trips are made in private vehicles (either by a single-occupant vehicle or a carpool/vanpool) and 82 percent of person trips are made by people driving alone.

**Other travel modes make up a small share of overall travel.** Sharing a ride is more common in off-peak periods, while travel by public transit is highest in the peak periods, but even then only carries three percent of trips. Bicycling and walking are slightly lower during the peak period than during the middle of the day, but the five percent of commuters that bicycle or walk is still more than use public transit.

## Congestion

**Congestion may affect economic development: too much congestion can be a factor in shifting development from one area of the region to another or, more rarely, to other regions.**

- Increasing traffic congestion is an inescapable result of robust economic activity and life in modern metropolitan areas, but it is not an economic benefit.
- If workers cannot access their jobs because of congestion or lack of public transit options, businesses may choose to relocate elsewhere, either to the outer edges of the region where these issues are not yet severe, or perhaps to other regions.
- Excessive congestion delay due to lack of road capacity irritates the public, wastes time, drives up neighborhood cut-through traffic, impedes business interactions (especially for trucking), can undermine property values and reduces choice of where to live and work.
- The Texas Transportation Institute reports the average loss to congestion delay at \$520 per person per year in the 75 largest urban areas, with Sacramento coming in at a loss of \$374 per person per year.

**The statement, “we cannot build our way out of congestion,” is essentially correct, because large metropolitan regions lack the resources, community will, and ultimately the space to provide for uncongested travel by auto.**

- Extensive roadway capacity does not solve congestion: cities with the largest highway systems—Los Angeles, Houston, San Diego and Atlanta—also have some of the nation’s worst traffic congestion. Similarly, good transit alone does not solve congestion: cities with the best transit systems—New York, Washington, DC, Boston and the San Francisco Bay Area—also have some of the nation’s worst traffic congestion.
- Sacramento, with a population greater than 2 million, has reached the size and activity level where congested auto



travel would be the expected norm, and accessibility replaces mobility as a dominant transportation objective. The willingness of people to continue driving under extreme congestion in Los Angeles, the Bay Area, and other large metropolitan areas shows that lack of road capacity and congestion are not primary factors in travel behavior. People in urban areas today expect and accept congestion to some degree, and readily tolerate a 20- to 40-minute commute.

**Interstates 5 and 80, Route 99 and U.S. 50 all experience up to 15 miles of congestion during morning and afternoon commute times, equating to 15 to 30 minutes of trip delay.**

- U.S. 50 east of downtown Sacramento now carries more traffic outbound in the morning peak than inbound, and has become the region's first section of freeway with two-way congestion both morning and afternoon.

- By 2035, I-80 will also have two-way congestion.

- Some of Sacramento's worst congestion occurs on crosstown suburban arterials: Watt Avenue, Sunrise Boulevard, Florin Road and Douglas Boulevard. As in other U.S. metropolitan areas, Sacramento has developed major suburban travel patterns, but—unlike many other metropolitan areas—lacks peripheral highways or a high-capacity transit system to serve them.

**Congestion is presently more of an issue for local traffic than for interregional travel.** Local traffic far outweighs both interregional traffic and truck traffic at critical congestion areas in the urban core. Interregional traffic comprises about 16 percent of daily traffic on Interstate 5 through downtown Sacramento, and about 12 percent on Interstate 80 through Roseville. Interregional traffic affects local commute congestion on Friday evenings, when pass-through recreational traffic tends to be concentrated.

**Congestion and delay can be triggered on a regular basis by peak auto demand that exceeds capacity, and intermittently by traffic incidents or distractions.**

- About 50 percent of congestion delay comes from areas where demand has reached or exceeded capacity, usually due to system features that constrict capacity: freeway on ramps, slow vehicles, hills or grades, limited sight distance, signals, bus stops, driveways, turn movements, and pedestrians and bicycles on arterials.

- About 50 percent of congestion delay occurs from incidents where capacity is compromised: accidents, stalled vehicles, spilled loads, roadside distractions, police stops, work zones and weather.

- Although traffic may increase gradually over time and roads may seem fuller, congestion appears at about 85 percent of road capacity and worsens dramatically with an increase of only a few hundred autos in the peak period.





**When corridors become congested, travel modes all complement each other, serving specific types of trips instead of competing.**

■ Autos and buses both depend on roads; bicycling and walking typically also use road corridors, so when a corridor becomes congested it is important to accommodate all travel modes effectively so travelers have real choices.

■ Carpooling, various forms of transit, and bicycling each offer certain time, cost, convenience and personal comfort advantages as an alternative choice to driving, and can become more attractive for certain drivers and certain trips.

■ In the downtowns of major cities such as San Francisco and Chicago, pedestrian congestion often exceeds vehicle congestion.

Strategic road expansion yields benefits, even if it does not reduce or eliminate congestion, but land use and travel effects become critical decision factors.



## **TRANSPORTATION DEMAND MANAGEMENT**

**Transportation demand management (TDM) is the collective term for programs geared towards enhancing the operation of the transportation network by reducing the number of single-occupancy vehicles through education and encouragement to use alternative transportation.** TDM focuses on the movement of people rather than motor vehicles. TDM encompasses strategies that reduce the amount of driving (and its growth) through behavior changes, so that costly transportation infrastructure investments can be avoided, downsized or delayed. These changes include carpooling and vanpooling, taking transit, bicycling and walking, flexible work schedules and telecommuting, as well as other programs that reduce vehicles miles traveled (VMT).

**Most TDM strategies are partially funded through employers, and therefore focus on work trips. TDM can be an effective instrument for broadening commute options and reducing the biggest congestion problem—commute-period congestion.**

### **TDM Opportunities**

**Commuters place a high value on predictable and reliable travel time.** Congestion adds delay cost on top of the higher cost of driving; when carpooling, transit or bicycling can become competitive in travel time, some drivers switch—particularly higher-income drivers who tend to be more sensitive to time delays. Some of the alternative modes—rail, bicycling, and walking—are normally not subject to road congestion, so travel times are more predictable.

**Parking costs play a large part in choice.** A 2005 Cleaner Air Partnership survey shows that downtown Sacramento workers are least likely to drive alone. A major reason is because parking downtown is difficult to find and the cost is high. Worksite parking, free and readily available everywhere except downtown Sacramento, is a major factor in commute choices, but the idea of pricing of workplace parking is not widely popular. Workers in outlying employment centers (most of which offer free parking) are most likely to drive alone.



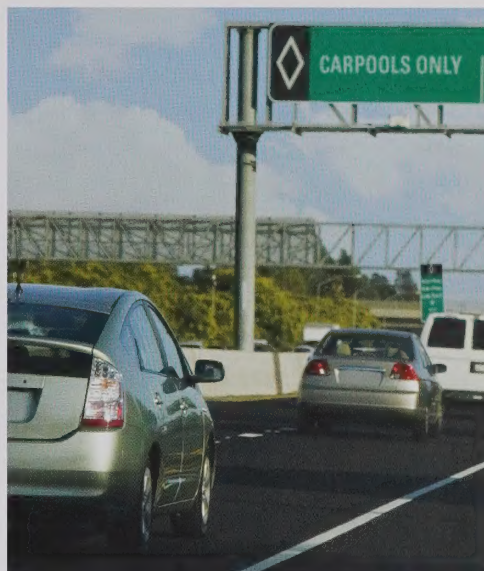
**Employers can provide benefits for not driving.** The 2001 Capitol Area State Employee Transportation Survey found that 54 percent of state workers commute using alternative modes. State workers receive significant rideshare benefits (including all or part of transit passes), have access to rail and bus services, are charged high parking costs, and nearly all state parking is reserved for carpools only.

**There are inherent benefits for using alternative modes.** Traveling by an alternative mode reduces cost, lessens stress, provides air quality and energy benefits and, in the case of biking and walking, health benefits. The obesity epidemic has raised public awareness about the importance of bicycling and walking for health. Fuel costs also add to the cost of driving; some drivers switch to carpools to share cost, or to transit, or to bicycling to avoid cost, particularly lower-income drivers who tend to be more sensitive to out-of-pocket costs.

Although not everyone can use an alternative travel mode, it works best for people who work regular schedules, face high levels of traffic congestion, are sensitive to the high costs of driving, are health-conscious or environmentally minded, and live near transit or bicycle trails and routes.

**Areas with denser employment, good access to public transit and freeway carpool lanes, high parking costs, or formal rideshare programs show higher use of buses, trains, carpools, vanpools, walking and bicycling.** More compact and mixed land use changes make traveling by alternative modes easier. The on-going development of the carpool lane network on area freeways is an enhancement for carpooling, vanpooling and express buses. Increased development density provides carpools and vanpoolers a larger pool of potential partners to match with in a close proximity of home and work. Transit will also be better able to serve the public, because it is more cost efficient when it operates in more urban environments.

**TDM programs represent an efficient way to get better use of the existing system and promote the reduction of driving and improvement of air quality.** Transportation demand management programs are low-cost in comparison to capital improvements and are cost effective.



And although a TDM program is a relatively small and low-cost part of the overall transportation system, if this program can cause a small percentage of trips to be shifted out of cars and into alternative modes, it can lead to a noticeable difference to the operations of the transportation system. Additionally, TDM improves the use of public services and facilities (transit services, bike facilities, sidewalks and carpool lanes) by educating users about their travel options and coordinating trips between users with similar trip patterns.

**The goal of the TDM program is to contribute to the 10 percent reduction in trips anticipated in the SACOG MTP2035.** While much of the trip reduction will be accountable to the changes in land use identified by Blueprint, increasing the use of alternative transportation through TDM will play a strong role in the education and encouragement of alternative transportation mode choice in the region.



## TDM Challenges

**TDM strategies are not as effective in areas with fewer alternative travel modes.** Because areas of our region differ greatly in their demographic characteristics and transportation facilities—for instance, public transit is not present or effective in rural or many suburban areas—one set of TDM strategies is not universally applicable. Without transportation infrastructure—public transit, carpool, bicycling, and walking facilities—TDM strategies are not as effective.

**TDM strategies should be carefully targeted.** Changes in behavior can also be understood in terms of a pyramid. Those who will not try, or cannot try (bottom); those who are willing to try (middle); and those who are motivated and willing to try (top). TDM marketing strategies tailored to those towards the top of the pyramid are more successful.

**Communities have unique characteristics making some strategies more effective than others.** Depending on land use, trip proximity and travel amenities, some alternative travel modes may be more attractive than others. Strategies focused on improving travel times, saving money and increasing personal convenience tend to be most effective. Expanding efforts beyond traditional commute patterns to include school trips, recreation, shopping and services also contribute to the overall goal of reducing VMT by 10 percent.

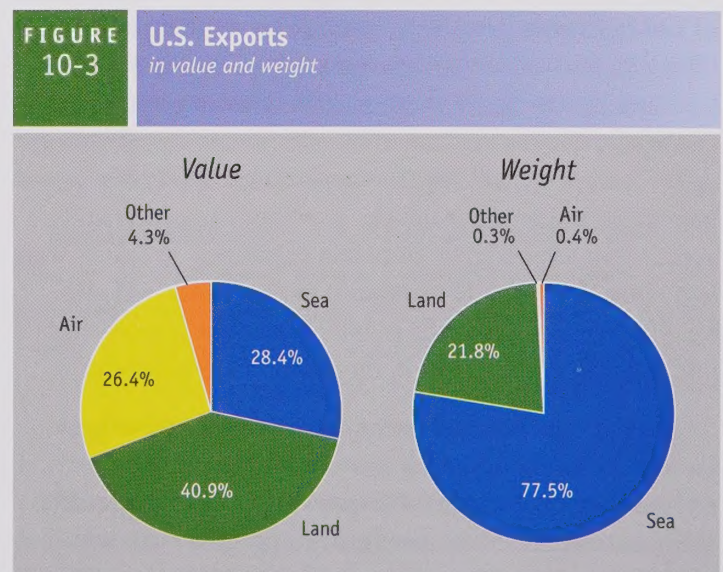
## GOODS MOVEMENT

**The economic vitality of the Sacramento region is extraordi-**

**narily dependent on the ability to transport goods to consumers, which is particularly critical to the viability of manufacturing, distribution and agricultural sectors.** Goods movement is one of many elements in regional competitiveness and can be a key tie-breaker in location decisions. Freight-dependent industries can be more easily attracted to regions with modern, un-congested infrastructure, and are discouraged from locating along crowded highways or older arterials that restrict truck flow. A region that has adequate goods-movement infrastructure and is strategically located from a trade perspective can profit considerably from its ability to receive, sort and deliver goods and services quickly, cheaply and effectively.

The amount of freight generated by a location is a function of many factors, among them the economic health of particular business sectors, the volume of commerce in the region, the climate of business production and innovation, technology changes, trade agreements, and government policies, programs and regulations.

Figure 10-3 describes the value and weight of U.S. exports by transport mode. Goods are transported through the Sacramento region using all five primary modes, each with its own relative opportunities and constraints:



Source: SACOG, July 2008



## Trucks

Most increased freight shipment is being carried by truck, a trend likely to continue. Both Interstate 5, linking the Central Valley with southern California seaports, and Interstate 80, linking the Bay Area, Sacramento, and areas east of the Sierra, carry 2,500 truck trips per day through the region plus another 5,000 that stop here. More truck traffic must use arterial roads as businesses move to suburban areas with limited highway access. With greater use of local routes and increases in truck weight limits, roads have deteriorated.

## Railroads

Major western railroads operate near capacity today, and can compete with trucks only hauling goods for more than 700 miles. Freight train miles traveled is expected to continue increasing dramatically during the MTP planning period, but very little new track is currently planned. A mile of track costs \$3.5 million to construct and approaching \$500,000 annually to maintain. Railroads are not earning a high enough rate of return to expand main-line track significantly.

## Port

The Port of Sacramento, serving one ship every three weeks, loses almost \$1 million every six months and requires significant infrastructure investments to compete. A strategic alliance between the ports of Oakland and Sacramento has recently been established to enhance the prospects for an economically successful Port of Sacramento. The port lies outside the congested Bay Area, nearer the Central Valley cargo market, with good connections via I-5, I-80 and railroad lines. Nevertheless, encroaching residential development threatens the port, and an upriver navigation location with a shallow channel limits opportunities.

## Airports

Mather Field has become a regional air cargo hub, even though half of air cargo still moves through Sacramento International Airport. Sacramento is still a relatively minor player; more than 90 percent of the state's airborne freight



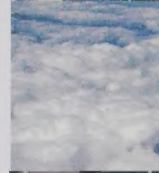
moves through Los Angeles or San Francisco. Both those cities, constrained by congested highways and limited opportunities to expand their airports, face challenges as international air cargo volume is expected to double or triple by 2025, offering Sacramento more opportunity to pick up growth.

## Pipelines

Petroleum products—specifically gasoline, diesel and jet fuel—are transported to the Sacramento region from the Bay Area by pipelines. Approximately 400 truck trips are dispatched every day from four Sacramento River terminals and a Bradshaw Road terminal to distribute gasoline and diesel fuel throughout the region. The pipelines allow these distribution trips to be local rather than to and from the Bay Area.

## Goods Movement Today

**The flow of goods in the Sacramento region is mainly focused on goods being moved to, from or**





entirely within the region. In spite of being at the crossroads of northern California's major highways, only 22 percent of goods are moving right through the region. Looking only at the volumes of goods being moved:

- The most important share of these movements are internal—movements entirely within the region—at around 29 percent, according to the FHWA's Freight Analysis Framework. Data on local freight movements are difficult to obtain and thus under-reported, so this percentage is expected to be significantly higher in reality.

- Another key segment of goods flow is for freight coming into the region from somewhere else—at 33 percent.

- The volume of through-movements of goods is about 22 percent. The region is located at the crossroads of I-5 and I-80 and at the junction of major north-south and east-west rail lines as well.

- Finally, the smallest of the four freight flows is exports from the region to other areas at about 16 percent of the total volume. Basic manufacturing of goods makes up a small part of Sacramento's economy, although agricultural products are a significant export.

**Within the Sacramento region, an estimated 90.6 percent of freight tonnage is carried by truck, 2.9 percent by rail, 0.4 percent by ship and 0.1 percent by air.** The remainder is carried by some combination of modes or by pipeline. **It is important to remember that even freight moved**



**by ship or train still must almost always travel “the last mile” to its destination by truck.** Average daily truck volumes on the region's freeways range from around 3,000 per weekday on State Route 70, 4,100 on U.S. 50, 8,000 on State Route 99 and I-80, and up to 10,650 on I-5. **Figure 10-4** shows the growth since 1988 of daily two-way truck volumes on two major goods movement corridors in the Sacramento region. As businesses move to suburban areas with limited highway access, more of the internal truck trips must use arterial roads. Existing industrial areas are not typically alongside freeways, but located on arterials such as Power Inn Road, North Watt Avenue and Sunrise Boulevard.

**Locally, the makeup of shipments that stay within the region is about 35 percent gravel and other non-metal mineral products, 20 percent gasoline and petroleum products and 9 percent waste or scrap.** The only sizeable product exported out of the region is agriculture (both fresh and processed foods), and agricultural trucking depends upon rural roads, highways and freeways.

**Growth in air cargo, while dramatic during the 1990s, slowed significantly after 2001.** Since then, growth has been slower than the growth in either the economy or the population. Most of the air cargo to the region is inbound; that is, it consists of goods servicing



the needs of the local population. As very little is actually manufactured in the region, there is considerably less demand for outbound air cargo. Most truck traffic related to air cargo consists of small delivery trucks with only a few larger 53-foot trucks. There is more than adequate capacity for truck traffic in the region (trucks typically make up less than 10 percent of traffic volume); however, the growth in passenger traffic must be slowed to help preserve capacity for goods movement needs. The only significant truck-related need that has been identified is for improved access for trucks to points north and south of Mather Field.

**This region is somewhat unique in having four airports serving a population of its size.** Sacramento County has designated Mather Field as the region's air cargo facility, although Sacramento International Airport handled slightly more air cargo in 2007 than did Mather. This volume is primarily handled by the three main "integrated carriers": FedEx, UPS and DHL. Cargo handled by passenger airlines accounted for less than 5 percent of all air cargo in the region for 2007. Planned improvements at Mather to accommodate more air cargo have stalled as a result of litigation from local jurisdictions over noise issues.

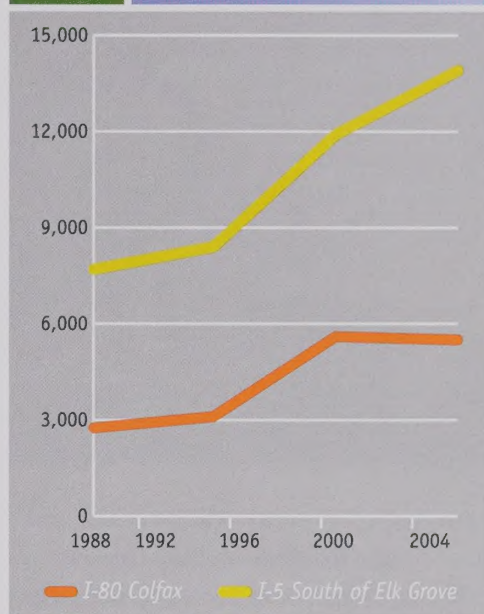
### Goods Movement Issues

**Goods movement can create friction with nearby residential areas. Key problem areas include:**

- **Neighborhood/truck conflicts:** Issues with truck volumes, noise and speed on major streets or arterials that front or abut residential areas;
- **Maintenance issues:** Problems with trucks causing pavement damage on arterials and rural roadways. Also issues with trucks "off-tracking" onto sidewalks and into poles, signs and streetlights; and
- **Congestion issues:** Trucks diverting onto arterials and rural roads to avoid congestion; trucks backing up traffic, especially on two-lane "main street" highways; heavily-loaded trucks that accelerate slowly from signals or in congested traffic; and, in some areas, concentrated volumes of trucks can be a direct cause of congestion.

**FIGURE  
10-4**

**Two-Way Daily Truck Volumes  
in SACOG Region**



Source: SACOG, July 2008

Potential policies encouraging coexistence can be contrasted with narrow efforts to ban or confine goods movement activity where it conflicts with passenger needs or bothers residents. Individual communities may be able to divert or discourage trucks, but if regional needs as a whole are to be met, such efforts become a zero-sum game. A policy of coexistence, on the other hand, would place as much emphasis on where trucks should be as on where they should not be.

A policy of coexistence is more challenging in the short-term, because it requires solving problems and balancing interests rather than postponing resolutions or surrendering to vocal community demands. In the long-term, however,





managing coexistence will be easier and more productive than waiting to confront growing problems or irreconcilable differences due to years of neglect.

**Heavy-truck traffic and wet weather comprise the two most critical factors in pavement deterioration.** In simple terms, one fully loaded 80,000-pound truck causes as much pavement wear as 10,000 automobiles. Since 1990, heavy-truck travel has grown at a 50 percent greater rate than automobile travel. Many local agencies have identified wear-and-tear damage from heavy trucks on arterial streets as a rising factor in poor pavement condition. In Sacramento, trucks commonly use arterial roads due to the lack of cross-suburban freeways. Heavy trucks also do major damage to older rural county roads not built for these kinds of loads.

**Despite a critical role in the region's economic vitality, goods movement is almost completely a**

**function of the private sector, making it difficult to identify critical public-sector investments.** Most freight carriers prefer to operate in the background—largely invisible to the public. While a number of transportation users form some sort of constituency (e.g., bicycle and pedestrian advocates, transit users), it is often noted that “freight doesn’t vote.” The result of this is that the needs of the freight transportation industry are largely unknown to the general public and unacknowledged by policy-makers and planners. Too often, planning agencies must tell their constituencies that no reliable data exist to answer their questions, or that elaborate estimation and allocation methods must be employed to infer the likely range of key numbers.

Freight movement forecasting can estimate what is going on in the economy at large, and knows what goods move in and out of a particular site, but knows much less about how and why goods are moved in between. Freight-flow data range from global estimates of total national ton-miles to truck counts on specific local streets. Methodologies in use are equally broad—ranging from sophisticated models to back-of-the envelope guesses. Regional forecasting needs can range from satisfying public curiosity to demands for specific performance measures.

**Clearly identified funding sources for goods movement investments are seriously limited.** The conventional sources of funds are property taxes and development fees. Neither of these sources appear adequate to address the potential adverse financial impacts on cities or other jurisdictions. Input from regional economic development directors clearly indicates that the formula for development fees and valuation for property taxes tend to under-value large distribution centers. Thus, large distribution centers do not typically generate enough civic revenue to pay for the required infrastructure upgrades or maintenance, and the State of California no longer has an inventory tax.

Industrial developers have opportunities to tap state funds under several programs. Some of these programs involve reductions in local tax revenue in return for



economic development, thus reducing the pool of funds needed to address impacts. None of these programs provide additional funds to localities. A first critical step in generating the pool of funds required to address financial externalities would likely be a revision of the development fee formula to better reflect long-term needs. Parallel revisions of property tax rules would be much more difficult.

A second option is the creation of regional or state funding to address local goods movement impacts. The recent California infrastructure bond initiative generated a large sum, but will be used to deal with only the largest and most prominent projects state wide. Additional ongoing funding initiatives would be necessary to generate funds for myriad local needs.

**Certain jurisdictions, whether for historical or location-specific reasons, have borne a disproportionate share of the goods movement burden for the region.** It is a challenge for the region to ensure that strategic goods movement assets are protected, and that those jurisdictions bearing the burdens are afforded some form of mitigation.

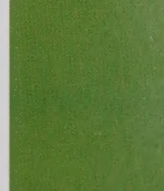
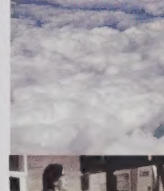


Allocating any source of freight funding among affected jurisdictions would likely be a process of negotiation. Road and highway funds are typically allocated according to miles of road or population, neither of which correlates with impacts from goods movement projects. A locality with a higher share of industrial or distribution facilities would experience a corresponding high volume of heavy-truck movements, but would not receive proportionate funds to repair the damage. The ability to segregate the impacts of good movement and predict the impacts of new development may be the key to a more responsive funding mechanism.

**Reserving urban land for the purposed of goods movement needs to be balanced with principles of compact, mixed-use development in the urban core.** Initial analysis by SACOG's goods movement study team suggests a few broad guidelines for when to maintain locations or incentives for goods movement businesses to locate or remain in the urban core.

- Manufacturing and processing plants could probably locate outside the urban core without substantially increasing truck travel (and may do so on their own initiative).

- Local goods distributors, however, require further investigation to determine their clientele and the consequences of moving them outside the urban core. One impact may be to simply replace the local supply site with the nearest freeway ramp as the effective distribution point;





another may be to shift freeway trips from a few large trucks to several smaller trucks.

- Hub-and-spoke distribution and gathering networks such as FedEx may need local presence in a community or neighborhood, but will base delivery fleets at outlying locations.

- Many suppliers, distributors and other businesses with a regional clientele prefer to be near the center of the region with good freeway access, but do not need high-cost center-city sites.

These observations imply that setting aside areas with appropriate zoning or other regulatory concessions to local distributors or similar goods movement businesses would help minimize total truck travel in the long run. It is not necessary to locate every such business in the core or to set aside tracts of land for manufacturing and processing in the

core (at least not from a goods movement perspective). A comparison of alternative land uses would be needed to insure that the net result is likely to be favorable.

**Effective goods movement requires coordination between travel modes, including trucks, rail and shipping.** The SACOG Goods Movement Study Report established that modal shifts between rail, truck and ships offer limited but significant opportunities for goods movement efficiency. Freight customers gravitate toward the most efficient mode that meets their needs. Modal choice, however, is only an efficient strategy where the efficient modes are available. Where shippers do not have access to efficient modes for physical or institutional reasons, the region's goods movement network will be operating less efficiently.

A SACOG policy of facilitating modal choice and minimizing institutional barriers would improve the ability of regional shippers and consignees to choose the most efficient mode. For example:

- The report identified opportunities to reduce truck vehicle miles traveled by importing cement through the Port of Sacramento by ship. Cement importers are constructing port terminals for that purpose. Success in reducing regional







truck travel, however, may depend on good highway access to and from the Port of Sacramento, and channel deepening to accommodate modern vessels.

- The report also identified potential efficiencies from transloading inbound building materials at McClellan Park. Maximizing the benefit, however, may depend on good truck routes between McClellan Park, Rancho Cordova, and other centers of demand.

**Modal Efficiencies:** Each freight mode strives for efficient operations independent of public policies. There may, however, be instances where modal efficiencies can be encouraged or discouraged by public initiatives. Most particularly, public policy may be able to influence the tradeoffs between efficiency and environmental impact. The development of a coherent regional truck route system, discussed under operating strategies, is a case in point.

**Does region want more freight terminals? Would economic benefits outweigh community impacts? Should the region support freight investments elsewhere to keep freight from going through region?**

Findings from SACOG's Regional Goods Movement Study Phase 2 Report suggest that the region should be selective in the goods movement and logistics functions it encourages. There are good jobs to be found in the logistics sector, yet not all such establishments create as much lucrative employment as might be expected.

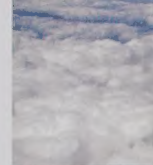
The report divided the goods movement and logistics industry into:

- Those services required to support the needs of SACOG-area residents and businesses; and

- Additional functions that might be based in the SACOG counties but serve broader regional or national needs.

The first segment is a necessity. The availability of land for goods movement activities may be limited due to the nature of the industry's operations, land requirements, land use restrictions, and pressures for higher value uses. However, even with these constraints there are compelling reasons to find answers to these limitations in order to meet the growing demand for goods and services within the SACOG region.

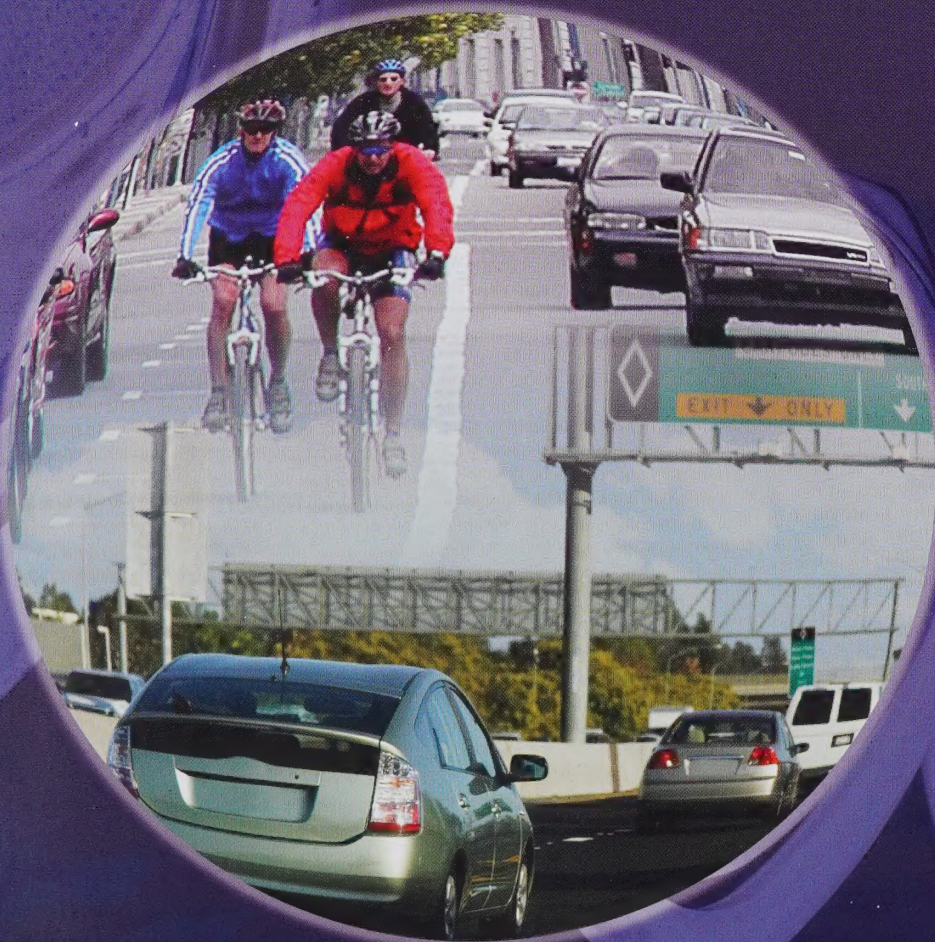
The second sector may be viewed as a potential opportunity, to be prioritized among multiple opportunities facing the region. At present, there appears to be limited enthusiasm among local elected leaders and economic development officials in the SACOG region for allocating scarce public resources to encourage the development of additional large warehouses, distribution centers and transloading facilities beyond the region's own needs. A key factor is "job density"—how many jobs does the proposed development create per 10,000 square feet? Job density is generally, but not inevitably, correlated with capital investment.





C H A P T E R 1 1

# Access AND Mobility



IMPROVE

OPPORTUNITIES FOR

BUSINESSES AND

CITIZENS TO EASILY

ACCESS GOODS,

JOB, SERVICES AND

HOUSING



It is important to understand the degree to which residents of the region have access to vital activities through a broad array of travel options. This is especially important for people who are unable to rely upon the flexibility of the personal automobile, and also for freight movement in and out of activity centers.

Transportation plans often focus on the issue of mobility, and improving mobility through investment in transportation infrastructure and services. Measures of mobility, such as mode share (or percent of travel using a particular travel mode), travel time and measures of travel delay, can provide information about how well transportation systems are functioning. These measures are included in Chapter 4 covering plan performance. Figure 11-1 shows the current transportation mode shares in the Sacramento region.

## BACKGROUND

### Travel Patterns

This section **focuses on all-day travel patterns** while commute trip patterns and the associated issues are discussed in the Economic Vitality chapter.

**Personal lifestyles and the economy depend on the ability to make trips all day, for recreation, errands, services and business.**

- 78 percent of all daily trips are made for purposes other than home-to-work.

- Commercial vehicles add an additional 10 percent more trips beyond the travel patterns analyzed here, some local and others longer distance, spread throughout the day.

**Growth in daily travel accompanies growth in housing, jobs and services, and much of this growth is occurring in community areas around the edge of the urbanized area.**

Figure 11-2 illustrates the daily traffic flows of person trips between community areas in 2005. The traffic flows include average weekday person trips by all modes, and for all trip

purposes, including work, school, shopping, social/recreational and personal business.

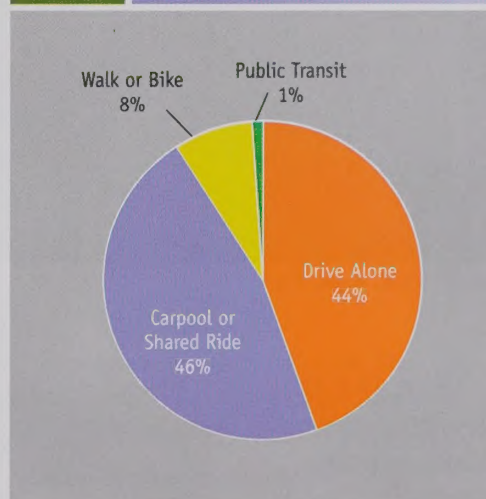
- Many of the largest existing traffic flows occur between more central areas in the region: downtown Sacramento, East Sacramento/Rosemont, Arden Arcade/Carmichael/Fair Oaks/Citrus Heights, North Sacramento and Natomas.

- Five other areas account for the remainder of the major traffic flows: Elk Grove, Rancho Cordova, Folsom/El Dorado Hills, Roseville and Lincoln/Rocklin.

- Three of the largest traffic flows cross the American River in eastern Sacramento County.

- Two of the largest flows are in and out of downtown Sacramento.

**FIGURE 11-1** Current Transportation Mode Shares  
In SACOG Region



Source: SACOG, August 2008

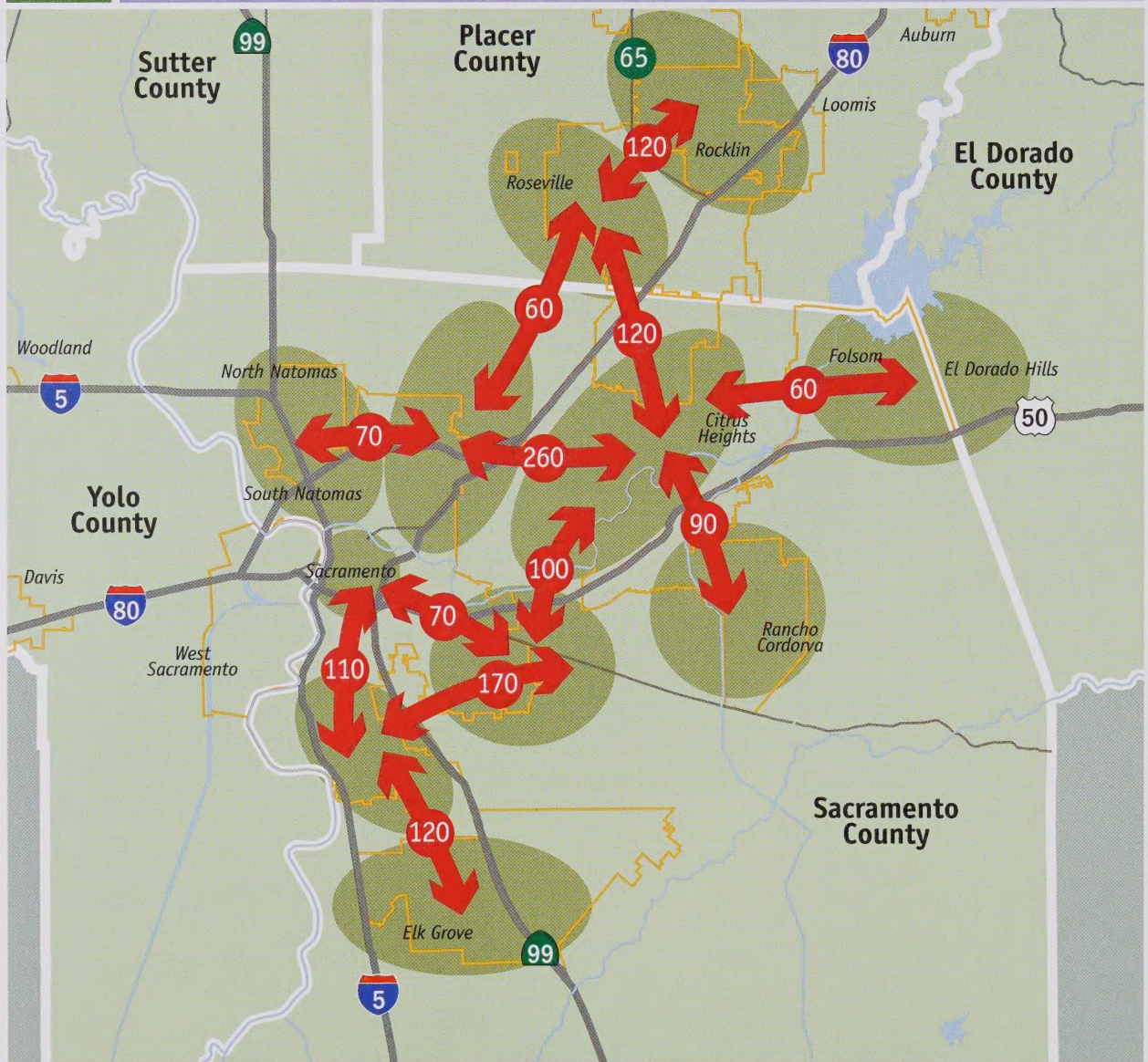


**FIGURE**  
**11-2**

### 2005 Major Daily Two-Way Travel Patterns

Weekday person trips for all modes and purposes (in 1,000s)

Traffic flows greater than 50,000 per day shown



Source: SACOG, August 2008

Figure 11-3 illustrates 2005 to 2035 growth in daily traffic flows between community areas.

■ West Sacramento, western Placer County, Roseville, Lincoln/Rocklin, Folsom/El Dorado Hills, Rancho Cordova, Vineyard/southeastern Sacramento County and Elk Grove account for all of the major growth travel flows.

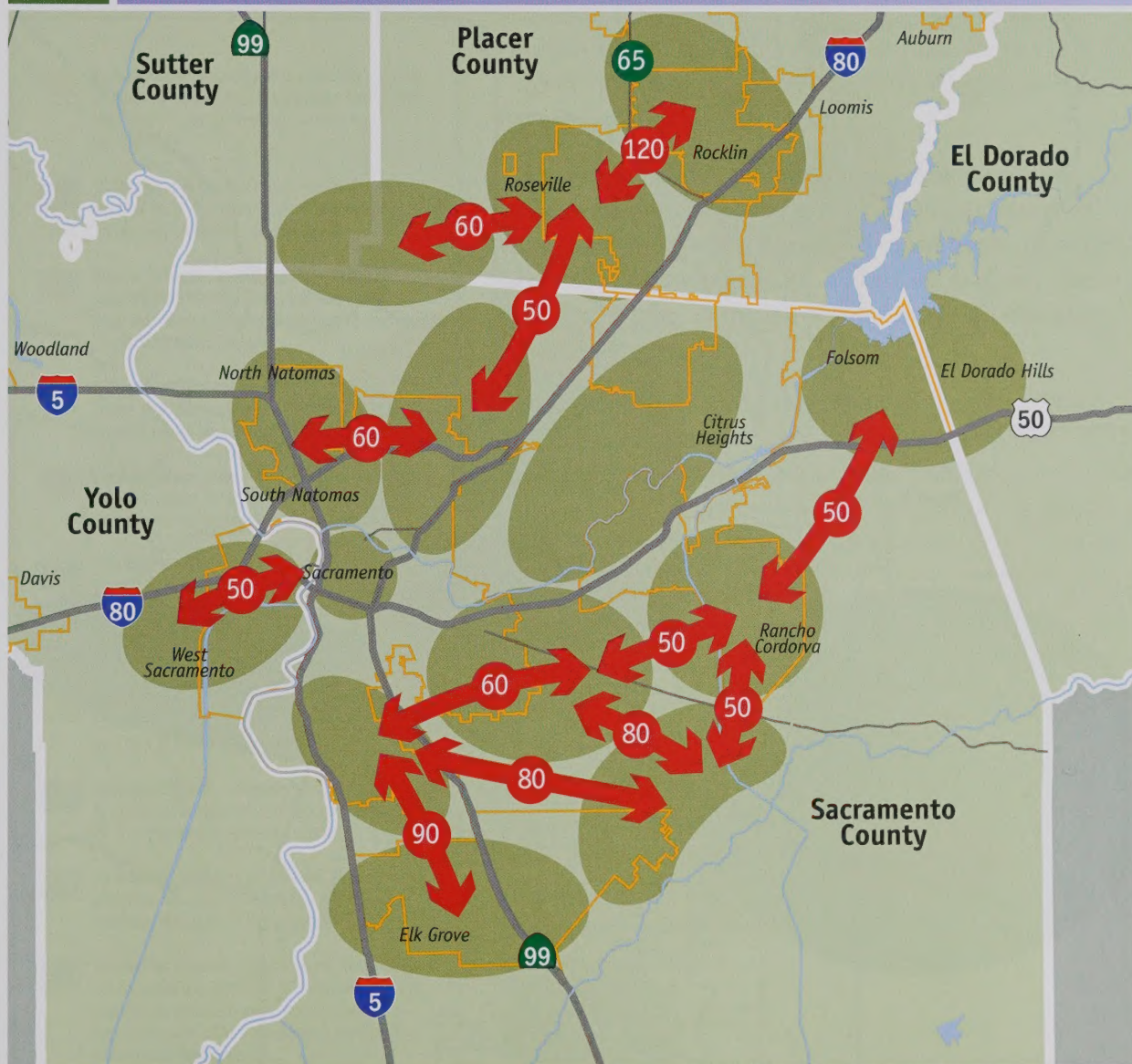


**FIGURE**  
**11-3**

# 2005–2035 Growth in Major Daily Two-Way Travel Patterns

Change in weekday person trips for all modes and purposes (in 1,000s)

Changes in traffic flows greater than 50,000 per day shown



Source: SACOG, August 2008

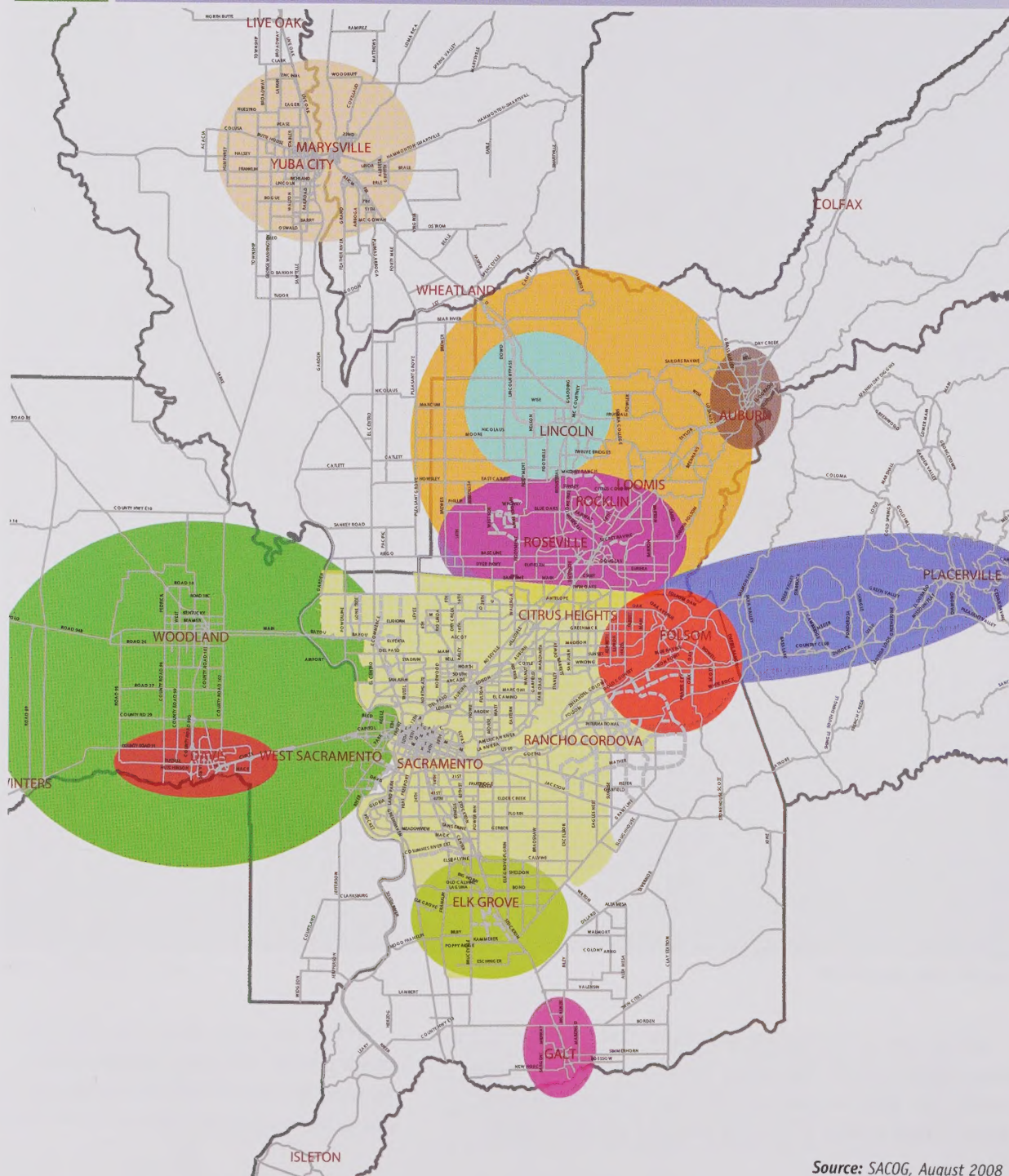
■ Only one of the high-growth traffic flows stays within the most central area in the region, between downtown Sacramento and West Sacramento. All other high-growth traffic flows connect either to or from outlying suburban areas.

■ Only one cross-river traffic flow had major growth in volume: between West Sacramento and downtown Sacramento, across the Sacramento River.



**FIGURE**  
**11-4**

**Transit Providers**  
*in the SACOG region*



Source: SACOG, August 2008



**FIGURE**  
**11-4**

**Key to Map**  
*of transit providers*

-  **Yuba-Sutter Transit**—Provides six routes service to Yuba City, Marysville, Linda and Olivehurst and commuter service to Sacramento
-  **Unitrans**—Provides public transportation service to the entire city with over 40 buses on 15 routes in the city of Davis
-  **South County Transit/LINK**—SCT/LINK provides service to Galt residents and provides direct intercity service to Lodi, Elk Grove and Sacramento
-  **Lincoln**—The city of Lincoln provides fixed route and demand -response public transit service to its residents.
-  **Folsom Stage line**—provide a convenient way for riders to travel to major employers and points of interest within Folsom.
-  **YOLOBUS**—The Yolo County Transportation District administers YOLOBUS, which operates local and inter-city bus service 365 days a year in Yolo County and neighboring areas
-  **e-tran**—provides transit service throughout Elk Grove and coordinates service to SAC RT and SCT/LINK
-  **Auburn Transit**—Auburn's transit system provides passengers with access to the city of Auburn and to Placer County
-  **El Dorado Transit**—El Dorado Transit provides six local bus routes serving the western slope of El Dorado County
-  **Roseville Transit**—The city of Roseville Transportation Division is responsible for providing public transit service within Roseville and offers commuter service to downtown Sacramento
-  **Placer County Transit**—PCT provides service for western Placer County residents and also provides a commuter bus that travels along the I-80 Corridor from Colfax to Downtown Sacramento
-  **Sacramento Regional Transit**—RT operates 97 bus routes and 36.87 miles of light rail covering a 418 square-mile service area

■ Growth in travel is increasing along two major axes. A south-easterly axis includes Elk Grove, Vineyard/south-eastern Sacramento County, Rancho Cordova, Folsom and El Dorado Hills. A north-westerly axis includes Natomas, northern Sacramento County, Roseville, Rocklin and Lincoln. Growth in travel flows generally follows along these axes, but not across or between them.

**Daily travel interactions, which increase somewhat from morning to afternoon as the day goes on, contribute significantly to peak-period traffic underneath the commute pattern, adding up to about three quarters of trips in the three-hour morning and afternoon peak periods.**

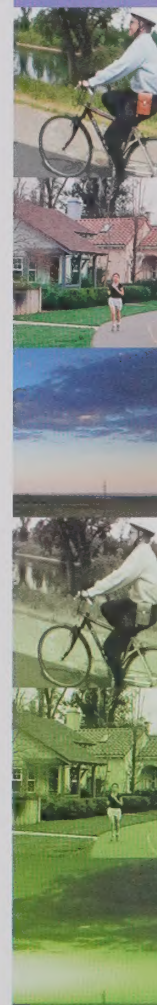
■ Non-commute trips—from home to schools or other places, or workplace business trips—tend to be more local and shorter trips, comprising less than half the vehicle miles traveled (VMT) in the peak period, but form a significant part of congestion, particularly on arterials.

■ Daily trip patterns are far more diffuse and less corridor-oriented than commute patterns; walking and bicycling can serve shorter trips well, but designing affordable transit services for daily trip patterns is very challenging, except where communities can develop high-density activity centers.

■ Truck trips are growing faster than auto, and that seems likely to continue. Commercial vehicles add an additional 10 percent more trips beyond the travel patterns analyzed here, some local and others longer distance, spread throughout the day.

### **Public Transit System**

Today, transit in the Sacramento region encompasses a wide array of services including urban light rail and bus service, express commuter buses from suburban cities, assisted paratransit dial-a-ride service for the disabled, and rural lifeline service running once-a-day or even once-a-week. Additionally, interregional rail and bus services facilitate long distance trips into and out of the region.







A complete list of the operators and details on current services is available in Appendix C1. Figure 11-4 is a map showing the approximate service areas of each transit operator.

**Transit serves only a small niche of overall travel in the region today.**

■ In total, transit carries 1 percent of daily trips in the region, including 3 percent of peak-period commute trips and 20 percent of commute trips to and from downtown Sacramento. As the largest regional employment center and the one area with transit-friendly land use densities, downtown Sacramento is the

focus of many transit services.

■ Transportation model analysis showed that a transit mode share increase from 1 percent to 2 percent would yield a 10 percent decrease in traffic congestion. The Blueprint intention for more compact development and community activity centers offers hope that conditions for transit service will improve in the future.

■ Urban density matters. Denser cities such as Boston, Baltimore and Los Angeles operate at about 30 percent lower cost-per-rider compared to more sprawling cities like Dallas, San Jose and Sacramento.

**The transit system’s two main kinds of customers—“transit-dependent” and “choice-rider”—have different travel patterns and are best served with different route and service structures.**

■ The transit dependent are those who cannot afford to or cannot drive and are very sensitive to transit fares and monthly pass costs. Sacramento RT estimates somewhat more than half of its current ridership—and 75 percent of off-peak riders—are transit-dependent. The percentage of transit-dependent riders is even higher for the smaller suburban operators. Transit-dependent riders need access to jobs, shopping and services and are served best with an extensive local route network.

■ Choice riders—those with an auto available—tend to be sensitive to different economic factors. Most of those who can afford the average sunk cost of \$8,000 per year to own an auto can afford the marginal cost to drive it. Models indicate behavior begins to shift at about \$3.50 to \$4.00 per-gallon gasoline or \$100 per-month parking, as lower income auto owners look for other options, including transit and rideshare. Availability of free or low-cost parking at work is another important factor in why people drive alone to work. Where parking is expensive, a much larger percentage of employees use other ways to travel to work, such as carpooling or taking transit. Commuters who might choose transit over driving would typically be most attracted by faster, more frequent, and more direct service on major



transit corridors that link residential areas to job areas.

### ***Bicycle and Pedestrian System***

**Bicycle and pedestrian trips are an important component of an effective transportation system, particularly for short trips.**

- Many people—youth, elderly, disabled, low income, or those who do not have access to an automobile—are dependent on walking and bicycling to access goods, services, activities, and destinations such as transit, medical services, education and employment.

- Poor walking conditions can contribute to social, physical, economic and social isolation of these vulnerable people, by making them feel unsafe or uncomfortable walking beyond the home.

- Others prefer bicycling or walking to driving, even if they have a car available, for health or environmental reasons.

**Most transit trips involve walking or bicycling at one or both ends, so pedestrian and bicycle access strongly affects the effectiveness and efficiency of transit service.**

- Commuters are more likely to use transit if they can easily walk or bike from their home or worksite to transit stops. As a result, pedestrian and bicycle improvements are often an effective way to improve transit.

- Better intermodal connections, such as convenient park-and-ride locations, on-board bike racks, secure bicycle parking, safe and pleasant access routes, and short-cuts can enhance the appeal of non-motorized modes and transit.

- A denser grid of transit lines brings more people and job sites within easy walking range of transit.

**Increased physical activity improves public health.**

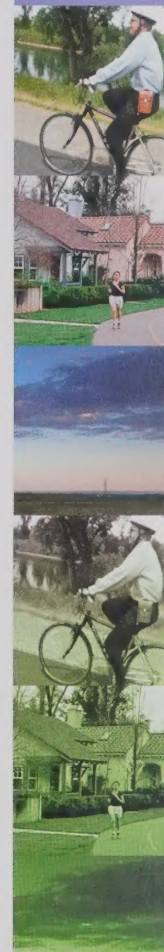
- In the U.S., walking and cycling for transportation has declined by about 40 percent since 1977, to approximately 6 percent of total trips, while nearly 65 percent of Ameri-

cans are currently either overweight or obese.

- One study found that shifting from a very sprawling region such as San Bernardino, California, to a less sprawling region such as Boston, would result in a reduction of 200 chronic medical conditions per 1,000 population, a 16 percent reduction. Increased street connectivity brings more destinations within walking distance, and is significantly associated with reductions in hypertension and heart disease (Sturm, 2005).

- Walking is the most popular and cost-effective form of physical activity, and many experts believe that increasing non-motorized transportation is the most practical and effective way to improve public fitness.

**The Sacramento region enjoys large public support for bicycling and walking.**





- There are several citizen groups that actively advocate for improved facilities.

- Support was shown for bicycling during the May 2007 Bike Commute Month campaign, when around 4,800 bicyclists logged more than 926,000 bike miles. Participation in the event increased 24 percent between 2005 and 2006 and 48 percent between 2006 and 2007.

- During the planning period for this MTP, participants in public workshops prioritized land uses that allow for more frequent use of bicycle and pedestrian trips.

**Of eight million daily trips today in the Sacramento region, over 100,000 (2 percent) are bicycle trips and nearly 500,000 (6 percent) are pedestrian trips.**

- The MTP2035 envisions a larger and more complete bicycle and pedestrian network for our region that will allow and encourage greater use of these travel modes. The bicycle and pedestrian share of trips the MTP2035 increases significantly from this starting level.

**Significant barriers to bicycling and walking have been consistently identified by SACOG, Caltrans, local agencies and advocacy groups in the Sacramento region. Key barriers:**

- The safety of facilities (i.e., potholes, cracks, debris, too narrow, no lighting, hidden from public view) and motorist behavior (i.e., high vehicle speeds, vehicle congestion, crowding or swerving, disobeying/unawareness of traffic laws);

- The lack of convenient direct routes to desired destinations, such as colleges or shopping centers, exacerbated by barriers such as rivers, freeways, major arterials, large parking lots, railroad tracks, soundwalls, cul-de-sacs, and gated communities;

- Poor connections to public transit stops and stations; and

- The lack of bicycle racks on buses and trains and at destinations.

**The federal Americans with Disabilities Act (ADA) mandates that disabled persons must be able to access the transportation system, including streets, roads and walkways.**

- Under the ADA, public agencies are required to prepare transition plans showing how they intend to provide for this access. Plans have been completed by the cities of Sacramento, Citrus Heights, Galt and Rancho Cordova, and the counties of Sacramento and El Dorado, and they are now gradually funding and building projects to implement their plans. The plans include a schedule for providing curb ramps at intersections and access improvements on public walkways.





■ Although the total regional cost of ADA compliance is not known at this time, Sacramento County has estimated that it would cost \$67 million to bring curb ramps, accessible signals, and sidewalks up to federal standards in the unincorporated county.

■ About 50-60 percent of roads in the urbanized area have no sidewalks, most commonly in suburban areas that were not built up as large subdivisions. This share is much higher in rural areas.

**Bicycle and pedestrian facilities are often built by local agencies as part of other capital projects.**

■ These projects are not solely classified as bicycle and pedestrian facilities because they often serve diverse purposes, such as putting utilities underground or adding shoulders for road safety, and are funded within other transportation programs. For example, these bicycle and pedestrian paths can be included in recreation, public health, or transit budgets, developer impact fee programs, or the state's Safe Routes to School program.

■ There is a cost-effective opportunity to incorporate bicycle lanes and sidewalks when roads are rehabilitated, repaved or widened.

■ Developers of new areas are expected to provide high-quality bicycle and pedestrian facilities as part of the basic public infrastructure, but good connections can be frustrated by cul-de-sacs and gated or walled neighborhoods.

**Road System**

**Much of the region's road network was built in the 1950s and 1960s, designed for 20 years of excess capacity.**

■ Gas taxes—2½ times larger in real terms than today's—supported the robust highway construction program of the 1950s and 1960s. That construction boom built the trunk highway and arterial system we have today, which since has been surrounded by urban development, making it difficult and costly to expand.



■ Now sales taxes and development-based funds have become the main sources to pay for road expansion, and state law provides obstacles that have often limited this expansion only to areas in close proximity to the new development.

**Congestion has increased dramatically over the years.**

■ Since 1970, VMT has increased by 190 percent, while population increased by 110 percent. During the same period, lane-miles of road (space on the roadway system) increased by only 30 percent.

■ Drivers faced daily congestion on 17 percent (27 out of 160 miles) of greater





Sacramento urban freeways in 1993 during peak periods, but 38 percent (61 miles) of freeways are congested today.

- Congestion typically appears when traffic reaches 85 percent of the road's capacity. Many roads that were congestion-free for 30 years or more have in the last 10 years loaded up to where daily congestion now occurs.

### **Driving alone remains the major travel mode in the region.**

- More compact land uses shorten trips and change travel choices, but auto travel is still expected to remain the most prevalent travel mode—89.3 percent by auto, 2.4 percent by transit, and 8.3 percent by bicycle and walking in 2035.

- By 2035, population increases more than 40 percent and overall travel increases by 50 percent. Even with more compact Blueprint land uses, the region expects 30 percent more trips by auto by 2035: 11.1 million auto trips per day versus 8.4 million today.

### **Carpool lanes increase capacity and yield more ridesharing.**

- Urban freeway expansion today almost always involves carpool lanes, and carpool lanes are never created by converting existing lanes to carpool-only lanes. Caltrans reports that one carpool lane on State Route 99 in Sacramento **carries twice as many people in a peak hour** as any other lane. Utilizing carpool lanes for express bus service is an important factor in maximizing productivity. A typical freeway lane running at capacity carries 2,200 people per hour in automo-



biles, while a carpool lane carries 3,000 to 4,000 people per hour, and hundreds more if express bus service is used. Figure 11-5 shows a comparison of capacities for several road types. Carpool lanes that facilitate express buses carry, by far, more people per lane than any other road type.

### **Public polls show support for increased investment in transit, but by increasing percentages, the public continues to favor driving alone.**

- Polling for Sacramento County's Measure A indicated that the measure would not pass without road expansion in the program.

- National Travel Census shows a gradual decline in transit and carpooling for commuting from 1990 to 2000, consistently all over the U.S. More recent data demonstrates a modest increase in the region's transit commute share of travel.

- According to a regional survey in 2007, four out of every five residents believe transportation system improvements must be made, and they want transit improvements, but 75 percent of those people also say transit is "for the other guy."

- Fifty-five percent in the regional survey believe investing in transit is extremely important and 52 percent feel investing in highways and roads is extremely important.



■ SACOG region residents want a mix of highway/freeway and public transportation improvements and also place a high priority on road maintenance. These findings were consistent throughout our survey research.

### Suburban development patterns and densities today create a dependence on auto travel.

■ The combination of low density, separation of residential, commercial and employment areas, and the common 8-to-5 workday are the real causes of high vehicle miles traveled and peak-period congestion.

■ Only downtown Sacramento and limited, scattered locations elsewhere have high enough densities to support transit as an effective and efficient alternative to driving for large numbers of people.

## ACCESS AND MOBILITY ISSUES

A balance of transportation investments is needed as the region transitions to a new, more dense and mixed land use pattern. Sacramento faces a chicken-and-egg dilemma: it must go through a transition in development patterns to achieve a

transition in travel choices, and both transitions will proceed incrementally.

■ A 1 million population increase will require strategic road improvements, given today's starting point with 95 percent auto ownership and prevailing residential and office park densities in auto-oriented suburban areas.

■ The early years of Blueprint implementation are challenging for transit. Infill and compact development work best with high-level transit service, but that level of service does not operate efficiently until compact development is in place. Recognizing this transition, the region must design road and transit capacity strategically in both timing and place.

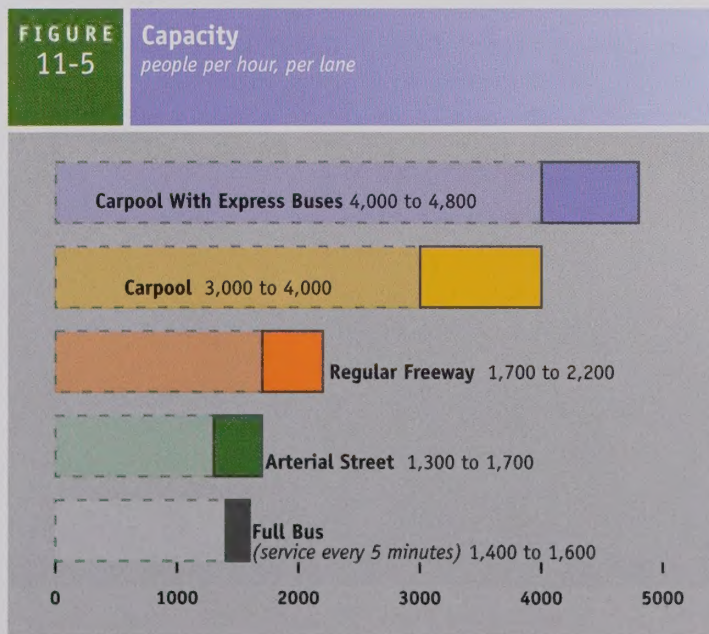
### Transit System

**For the choice rider, public transit competes with auto travel on flexibility, convenience, timeliness, security and comfort.**

■ Travel time greatly influences the behavior of the choice rider since many value their time at their wage rate, typically in the range of \$10–\$20 per hour.

■ Route transfers add to travel time and uncertainty, yet Sacramento Regional Transit's route structure forces about half of its riders to transfer between bus and light rail, or between buses.

■ Service frequency also matters for choice riders. Few accept bus intervals longer than 15 minutes, but only 7 percent of the region's services run that frequently today, and in far suburban



Source: Caltrans



and rural areas, 15-minute service is rare and hourly service the general rule.

**When policymakers assess how to spend the limited dollars available to expand service, two primary considerations—geographic coverage and frequency of service—often directly conflict with each other.**

- Greater service frequency meets rider preferences for reliability, shorter waiting times, and comfort, particularly in peak periods when overcrowding is an issue.

- Wider service coverage does reach more potential choice riders, but if service frequency is too low, those customers will rarely use transit.

- In order to achieve optimal coverage and frequency, transit expansion must rely substantially on buses, given the cost of rail and the gradual evolution in employment and residential densities to support rail transit. And, good bus service depends on an ability to bypass or avoid major congestion.

**Significant growth in the senior population, as the baby boom generation ages, points to increased transit service demand for seniors as well as a restructuring of the way these services are provided.**

- The population over age 65, most of whom no longer commute to work daily, is expected to grow from 11 percent of the population today (225,000) to 21 percent by 2035 (625,000).

- Increases in those over age 75, with travel patterns amenable to community

transit service, is expected to nearly triple in 25 years, from 100,000 today to 275,000 in 2035 (11 percent of population).

- The population over age 85, of whom many are likely to be transit users, is expected to more than triple in 25 years, from 20,000 today to 75,000 in 2035.

### ***Bicycle and Pedestrian System***

**How can we encourage cities to design and retrofit communities to be more convenient for bicycle and pedestrian trips?**

- SACOG provides funding for bicycle programs throughout the region and strongly encourages Complete Streets projects. Additionally, smart growth development (as covered in detail in **Smart Land Use Chapter 7**) allows for more walking and biking trips.

- Despite the fact that bicycle and pedestrian projects tend to be less expensive than other major transportation investments, competing priorities for limited funds continue to challenge investment in these modes. The Sacramento region must plan transportation capacity investments strategically in both timing and place, to keep infill communities accessible during a transition time from edge development dominated







by auto travel to more compact infill where walking and bicycling become more convenient and preferable.

- Implementation of ADA transition plans is a high priority, yet the high cost and lack of funding means they must be phased over time.

### **Road System**

**New road capacity may directly relieve local congestion, but it also indirectly exerts strong effects on growth in the corridor or area. Too much new road capacity can offer temporary congestion relief, but can also become a magnet for new development further out, with the congestion eventually returning.**

- New road capacity may directly relieve local traffic congestion, at least temporarily, but also indirectly affects growth in the area. This connection makes it important to consider land use planning when planning for roadway expansion.

- Radial freeway expansion in suburban areas since the 1950s has drawn development outward along those corridors where unused capacity becomes an inducement that reduces the cost of access for development there.

- Expanded capacity for interregional travel, including trucking, can also be used for commuting, thereby enabling low-density development to the edge of the region and beyond.

**Some increase in congestion is largely unavoidable.**

- To some extent, the region must accept that increasing traffic congestion is an inescapable result of strong economic activity and life in modern metropolitan areas. Traffic congestion is found in both relatively dense cities like Boston and San Francisco and sprawling low-density ones like Phoenix and Atlanta.

- Large metropolitan regions lack the resources, citizen support, and ultimately the space to provide for uncongested automobile travel.

- When a corridor becomes congested, all modes—transit, driving, bicycling and walking—complement each other by serving specific demands.





C H A P T E R 1 2

# Financial Stewardship



MANAGEMENT OF  
SCARCE FUNDING  
RESOURCES TO  
KEEP THE EXISTING  
TRANSPORTATION  
SYSTEM SERVICEABLE  
AND OPERATING  
EFFICIENTLY, WHILE  
ALLOWING FOR SOME  
SYSTEM EXPANSION



Financial stewardship must face two key challenges up front:

- How to pay for transit operations and replacement of worn-out equipment; and
- How to fund the continuing need for road maintenance and rehabilitation, which lead to the need to make strategic operational improvements to gain more efficiency from the system and reduce the need for high-cost new capacity.

## TRANSIT OPERATION FUNDING

Financial stewardship begins by recognizing the vitally important role that transit service plays in realizing the Blueprint growth concepts and the challenges in securing adequate funding to continue existing services, let alone expand the coverage and frequency of transit across the SACOG region through 2035.

### *Challenges for Transit Operations Funding*

**Operating public transit systems requires a significant financial commitment. In 2005, the 14 transit services in the region needed about \$160 million to operate.** These operating costs include drivers, mechanics, dispatching, fuel, parts, supplies, services and administration. On average, 75-85 percent of operating costs are for labor, and employee compensation costs have been rising faster than the rate of inflation.

Sacramento Regional Transit, (RT) which carries about 80 percent of the region's transit trips, accounted for about 70 percent (\$106 million) of regional operating costs in 2005, although suburban operators with long commuter and rural routes comprised a larger share of passenger miles traveled. Every bus that Sacramento RT operates costs an average of \$300,000 annually to run, requiring \$240,000 from public funding to supplement fares. Some of the smaller operators can operate buses for significantly less due to non-union labor contracts, but their costs are increasing as well.

**Over time, the methods of paying for transit opera-**

**tions have changed and the range of funding sources has declined, placing more emphasis on local sources.** Prior to Proposition 13, enacted in 1978, local general funds covered more than one-third of operating costs in the big urban areas, but that source has largely dried up due to competing priorities for the smaller pot of general fund revenue. Increasingly, Congress and the Legislature have restricted the use of federal and state funds for transit operations (with the exception of vehicle preventative maintenance), on the principle that this is a local responsibility.

**As federal and state funding support for transit operations declined, transit operators turned to more volatile local sales tax funds.**

■ A significant share of Sacramento RT's operating revenue in 2005 came from two sales tax sources, the Transportation Development Act (TDA), and the Measure A half percent sales tax. All urban Sacramento TDA revenues go to transit, and the bulk of those go to Sacramento RT. In addition, Sacramento RT covers about one-third of its operating cost from Measure A one-half percent sales tax (currently comprising its own 33 percent share plus the city of Folsom's share), and RT will take 38 percent of Sacramento County's Measure A renewal to sustain that funding stream beginning in 2009.

■ Smaller and suburban transit operators typically rely on TDA funds to cover half of their operating cost, and public works departments that use remaining TDA funds for road maintenance some-







times resist transit expansion that would draw a larger share of TDA funds to cover increased operating cost.

### *Issues for Transit Operations Funding*

**Significantly higher levels of funding for transit operations are needed for the expansion envisioned in the MTP2035.** Maintaining current levels of transit service and expanding it in the future is limited by the lack of transit operating revenue, not by lack of transit capital revenue. Even with Sacramento County's Measure A sales tax extension, RT operations consume about 90 percent of all funds currently usable for maintaining and operating the existing fleet, so Sacramento RT's ability to expand operations is effectively capped by operating funding.

**Fare increases can help cover this gap, but increases need to be sensitive to the ability of transit-dependent persons to pay.** Increased fare revenue depends largely on more choice riders, but service must be significantly better to attract more choice riders, and better service requires more funding, particularly

public funding. Fares are often set for public policy reasons, balancing the ability of transit-dependent persons to pay with the need to raise revenue to pay for operations. Sacramento RT offers a wide array of discount fares and passes, which limits its total fare revenue. More riders usually mean more fares to cover operating costs, so higher ridership becomes a critical part of the service expansion equation. But no transit operator in California, except BART with its all-rail system, covers more than 40 percent of operating costs with fares. In the SACOG region, Sacramento RT covers only 20 percent of its operating costs with fares, a number that has been gradually declining over time; 7-16 percent is a typical range for smaller operators but some low-cost suburban operators with commuter express runs cover about 20-30 percent.

**Increased operational efficiencies alone will not solve the transit operations funding issue.** Developing a 2035 transit network that optimizes transit services with emerging local land-use plans helps improve projected operational efficiency, but more funding for operations is still necessary. The MTP2025 assumed a large increase in efficiency, which meant more riders per vehicle and thus more fare revenues, but that enabled only a 50 percent increase in service level, much less than the MTP2035 that assumes a greater than 150 percent increase in transit service hours. As an example, for a Sacramento RT route to cover its operating costs (net of fares collected) each route would have to carry 75 riders per run. RT's best current run in 2005 carried about that many on a daily average, but its system-wide average was about 15 riders per run.

**The MTP2035 must deal with significant transit vehicle replacement and maintenance costs that are growing faster than the rate of inflation.**

- The region's fleet of 450 transit buses, with a 12-year service life, will need to be replaced twice over the next 25 years at a cost estimated at \$400,000 per bus, totaling \$360 million. This increase incorporates the need to increase the number of spare buses that increase operational efficiency in the long-run, and replace new buses that have become part of an expanded fleet. For example, RT has



been running with about 15 percent spare buses in its fleet, versus a national average of 22 percent, eventually leading to an increased breakdown rate and extra costs to send out backup buses.

The region's fleet of 200 paratransit coaches, with a five-year life service, will need to be replaced five times over the next 25 years, at \$85,000 per coach, totaling \$85 million.

- Sacramento RT's light rail fleet, now at 76 vehicles, will need heavy overhaul at least once during the next 25 years, at a cost of \$3 million per vehicle, totaling \$228 million.

- In addition, new state clean air rules indicate that many suburban operators will have to convert fleets from diesel fuels to clean fuels in upcoming years, making buses costlier, posing new fueling arrangements, and perhaps requiring earlier retirement of older diesel coaches.

Beyond maintaining the existing transit system, the MTP2035 requires 957 full-sized buses, 105 rail vehicles, and 584 paratransit coaches by 2035 to serve the new land development objectives and accompanying transit services that are envisioned.

**Although not as critically underfunded today, transit capital needs for the MTP2035 are large and constrained.** The most critical challenge is that the region has no funding source dedicated for bus and rail vehicle capital. These needs total over \$1.5 billion for vehicles over the next 28 years. In seeking federal funding support, Cali-

fornia—and thus the SACOG region—fared poorly when seeking federal bus replacement funds during the first four years of SAFETEA-LU (2004-2007). Congress earmarked the program every year, and California, with 14 percent of the nation's urban transit service, managed to obtain only 6 percent of nationwide funding.

## ROAD MAINTENANCE FUNDING

### *Challenges for Road Maintenance Funding*

The other critical financial stewardship challenge is providing adequate road maintenance and rehabilitation across the region. As part of this, the MTP's policies and strategies address key questions, including how to address chronic road maintenance funding shortfalls (especially in rural areas), the consequences of continuing to defer maintenance, and tradeoffs between road maintenance, road expansion and improvements.

**Road maintenance is a statewide crisis. Since the 1980s, California has gained a reputation of poor quality roads—a startling reversal from the 1960s when California's road system was envied throughout the nation.**

California's six metropolitan areas with greater than 1 million population ranked first-, second-, third-, fourth-, sixth- and 10th- worst on a national list of 52 such metropolitan areas (Sacramento was worst). A statewide survey revealed that just 43 percent of all roads were in good-or-very-good condition and 15 percent were in mediocre-or-poor condition





in 2002. Due to the poor condition of roads, Sacramento motorists average \$609 in extra vehicle maintenance costs per household annually, sixth-highest among 52 urban areas greater than 1 million population nationwide and 54 percent higher than the average for these 52 urban areas.

Without action, this situation will likely continue to decline with greater use of local routes for goods movement and increases in truck weight limits. Rural roads that are used by farm equipment and heavily loaded trucks are particularly vulnerable to deterioration.

**Cities, counties and Caltrans are responsible for keeping the street, road and highway system in a state of good repair through regular maintenance activities.** There are thousands of miles of local roads and streets in the MTP Plan Area that are the responsibility of the 22 member cities and six counties to maintain. Adequate road maintenance and rehabilitation is costly.

- Routine preventative maintenance includes sealing cracks, repairing pavement, patching potholes, cleaning and repairing drains, fixing signals, and sweeping streets. To do this right costs around \$20,000 per mile, per year.

- Regular heavy maintenance, meaning a slurry or chip seal coat, adds costs in the range of \$50,000-\$80,000 per mile for residential streets, on about a seven-year cycle.

- For well-maintained roads, the pavement rehabilitation cycle, meaning an asphalt overlay, comes due in 15 years for



arterial streets and 30 years for local streets, costing \$300,000-\$400,000 per mile; rubberized asphalt can last longer and cuts road noise but costs about 25 percent more up front.

- Major repair, rehabilitation and reconstruction are less frequent, but much more costly. These activities include recycling old, worn-out pavement, repaving, reconstructing subgrade and drainage, replacing bridges and reconfiguring intersections.

**The six counties and 22 cities in the region spend about \$250 million per year to maintain, repair, rehabilitate and reconstruct the region's 10,700 miles of local roads, streets, bridges, and sidewalks.** Of this, about \$150 million (60 percent) goes for routine preventive maintenance, done primarily by public works forces, costing an average \$15,000 per mile of road, per year. An additional \$100 million (40 percent) goes for major repair, rehabilitation and reconstruction, usually done as discrete projects using contractors. This investment may seem large, but the reality is it is far less than current needs. Cities and counties are deferring about \$100 million, or 30 percent, of critical road maintenance and rehabilitation.

**In contrast to local governments, funding for road maintenance by Caltrans has increased significantly since the last MTP was adopted and—while this is a cost-effective strategy for the state highway system—it has reduced funding that used to be available for capital investments all around the state.** Caltrans is spending \$1.2 billion statewide for state highway maintenance and



\$2.4 billion for rehabilitation this year, three times what it spent ten years ago, and is working off deferred maintenance left over from the mid-1990s. Approximately \$150-175 million of that total is used in the Sacramento region; an amount 80 percent higher than was envisioned in SACOG's MTP2025 just five years ago.

### **Issues for Road Maintenance Funding**

**Local agencies have limited and insufficient sources of dedicated road maintenance funding.** Local road maintenance is the responsibility of local governments, and the only available funds to pay for it are the local share of the gas tax, sales taxes and general funds. Today the state gas tax covers only 25 percent of actual local road maintenance and rehabilitation needs. The typical local road maintenance and rehabilitation budget in the Sacramento region comes about 25 percent from gas taxes, 45 percent from sales tax revenues, 10 percent from other local sources including general funds, and 20 percent from state and federal funds for road rehabilitation, but it varies among jurisdictions. The other primary sources of revenue for public works agencies, including developer fees, assessments and bonds cannot by law be used for regular road maintenance.

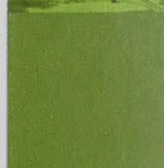
**Increases of more than 50 percent in the cost of fuel and asphalt and nearly 100 percent in the cost of concrete and steel since 2004 are further squeezing beleaguered budgets for road maintenance and bridge repairs.** Turning to higher levels of government to cover the local road maintenance funding gap is not an option, however, as state and federal transportation funds are reserved for capital improvements or major rehabilitation, and are not intended to cover general road maintenance. The result is that 20 percent of state and federal capital funds are going to rehabilitate failing roads, but not to keep good roads in good shape. This is not efficient or sustainable, but it's a last resort.

**Deferred maintenance leads to costlier future repairs.** Preventive maintenance and rehabilitation for deteriorated roads are crucial for our transportation system. Given funding shortfalls, local agencies do a creditable job

of keeping roads functional, but deferred maintenance continues to be the Achilles' heel of the whole system, forcing costlier future repairs. The MTP2025 estimated deferred maintenance at \$780 million regionwide, but a better estimate today would probably show closer to \$1.2 billion, growing by about \$100 million per year. The two graphs in Figure 12-1 show a 30-year cost comparison for preventive versus deferred maintenance.

**Truck traffic causes a disproportionate negative impact on road quality.** One fully-loaded 80,000-pound truck causes as much pavement wear as 10,000 autos, and trucks' numbers are growing: heavy-truck travel has grown at a 50 percent greater rate than auto travel since 1990. Rural counties end up as losers in funding formulas for deferred maintenance, but many must deal with resource-based economies such as agriculture, logging or mining that pound old, narrow roads with heavy trucks.

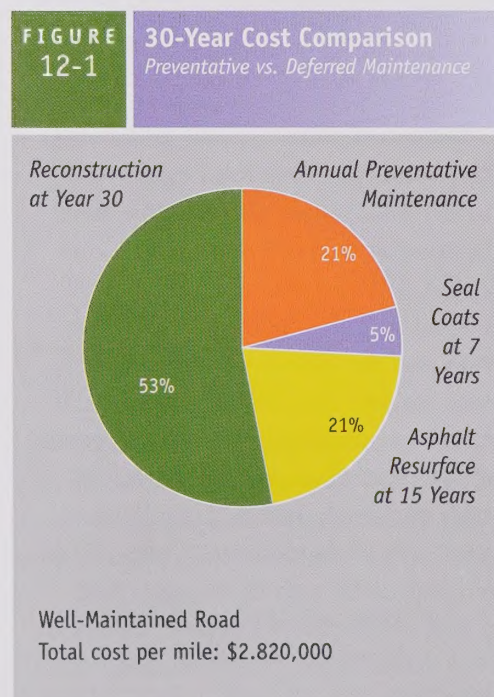
**Deferred maintenance problems vary widely across the region and funding formulas place some jurisdictions at a disadvantage.** The real cost of deferred maintenance is elusive, as local agencies report it in different ways and the damage occurs out of sight beneath the surface pavement. It affects jurisdictions unevenly, depending on such factors as age and design of roads and truck traffic. Older, built-out cities such as Sacramento, Citrus Heights and Marysville with older roads built to past standards and years of deferred road maintenance face continuing major rehabilitation costs. Newer, developing





cities such as Elk Grove, Folsom and Lincoln benefit from modern developer-built road mileage that boosts funding formulas without adding major rehabilitation liabilities yet, but such cities should attend to an increasing load of preventive maintenance to keep ahead of the curve. Cities often must deal with extra costs due to utilities in the roadbed, pavement damage from past utility work, and landscaping in the right of way; counties must consider adding paved shoulders to rural roads; and Caltrans faces added costs for complex traffic handling and night work.

**Diverting regional funding to road rehabilitation efforts has resulted in lower levels of funding for important road capital investments. The impact is apparent at each level of government:**



Source: SACOG, July 2008

- **Local Governments:** Maintenance and rehabilitation consumes about 80 percent of the typical local road budget today (not counting developer fees), leaving only 20 percent—about \$50 million regionwide—for local improvements and new construction.

- **Regional (SACOG):** Deferred maintenance, leading to road deterioration and need for rehabilitation, has led SACOG to divert 15 percent of state and federal funds to rehabilitation instead of improvements from 1988 to 2009, when a higher level of state funds comes on-line.

- **State (Caltrans):** For the first time, in 2005, the state consumed its entire 12-cent share of the gas tax, plus all of its federal funds for maintenance, rehabilitation and operations of state highways and administration of Caltrans, with none left over for state highway improvements or expansion.

## OPERATIONAL IMPROVEMENTS TO IMPROVE THE REGION'S ROADWAYS AND MINIMIZE THE NEED FOR EXPANSIONS

**Solving congestion and environmental problems through simply building more and more new transportation facilities is unreasonable—capital costs are very high and available funding is limited.** For the places in the SACOG region that need transportation investments to enhance access and support the economy, the greatest benefits are realized when the road system is managed for efficient performance and there is investment in alternative modes. With these investments made, road capacity investments can be more limited.

### Background

Road programs are so underfunded today that funding for road expansion must compete with funding for road maintenance, rehabilitation and operations. The cycle unfolds as follows: some road maintenance must be deferred; the road deteriorates to the point it must be reconstructed, which costs more but becomes eligible to use capital funds; and capital funds get siphoned off for road repair.

With gas tax funding significantly reduced, sales taxes and development-based fees are becoming the main



sources of road expansion funds—this source cannot be expected to grow indefinitely. Figure 12-2 shows the change in vehicle miles traveled (VMT) versus gas tax revenue between 1970 and 2000.

For local roads, development-based sources provided 8 percent of all funding for road expansion in 1985, 14 percent in 1995, and an estimated 25 percent in 2005. For the MTP2035 plan years, 28 percent is projected. These funds include tax-increment bonds, developer bonds, toll bonds, and other revenue-backed borrowing that can advance private funds that get repaid over the life of a project.

Caltrans is also starved for road-capacity revenue. The agency actively pursues developer funding for state highway improvements, since it can use only 40 percent of its 25 percent share of STIP funding for state highways in urban areas. This pursuit should intensify now that the state uses 100 percent of its shares of gas taxes and federal funds for highway maintenance and rehabilitation. More of the burden to fund urban state highway and freeway improvements also shifts to SACOG and local agencies.

Road pricing (e.g., toll roads, bonds), is a potential option; the public, however, has not shown willingness to tax itself at 1960s levels, when fuel taxes comprised 30 percent of the cost of gasoline. As a result, private funding and financing must be brought to bear if very high cost projects are to be built.

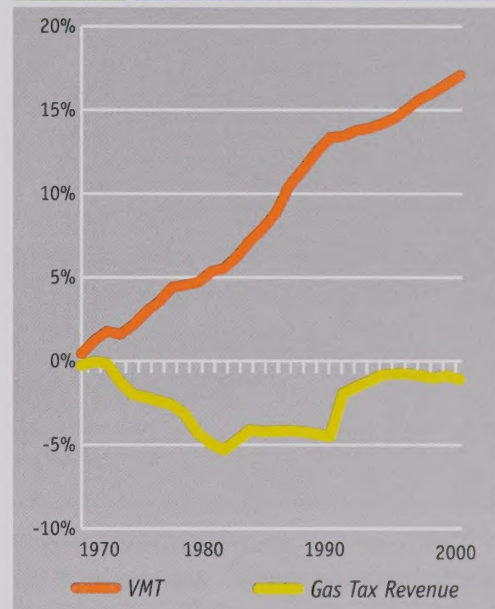
### **Opportunities to Reduce the Need for Road Expansion**

**The most cost-effective infrastructure investments are often those that maintain, preserve and gain more efficient use from existing road and transit assets.** Strategically targeted investments, such as safety improvements, technology deployment or fixing congestion bottlenecks, often provide larger benefit at smaller cost than general road expansion.

Looking at corridors as “systems” is an early step at identifying these opportunities. In support of this objective, SACOG efforts have recently included Intelligent Transportation Systems (ITS) planning, goods movement studies and corridor

**FIGURE 12-2**

**Change in Vehicle Miles Traveled vs. Gas Tax Revenue**  
1970–2000 Caltrans District 3 Area



Source: SACOG, July 2008

planning efforts focused on operational strategies. ITS efforts are described below while the goods movement planning efforts are summarized in Chapter 10 on Economic Vitality. The third initiative, a new Corridor System Management Plan (CSMP) initiative to examine freeway corridors, lead by Caltrans, is just beginning.

The CSMP collaboration with Caltrans will look at operational strategies and better system management of key corridors in the region. Each CSMP will attempt to address local goals and priorities related to regional blueprint planning, context-sensitive transportation solutions, and incentives to use of alternative transportation modes to the single-occupant vehicle. The CSMPs will present an analysis of existing and future traffic



conditions and propose traffic management strategies and capital improvements to maintain and enhance mobility within each corridor. Facilities included in the analysis will include state highways, local parallel roadways, freeway access (interchanges), regional transit services, and other regional modes pertinent to corridor mobility.

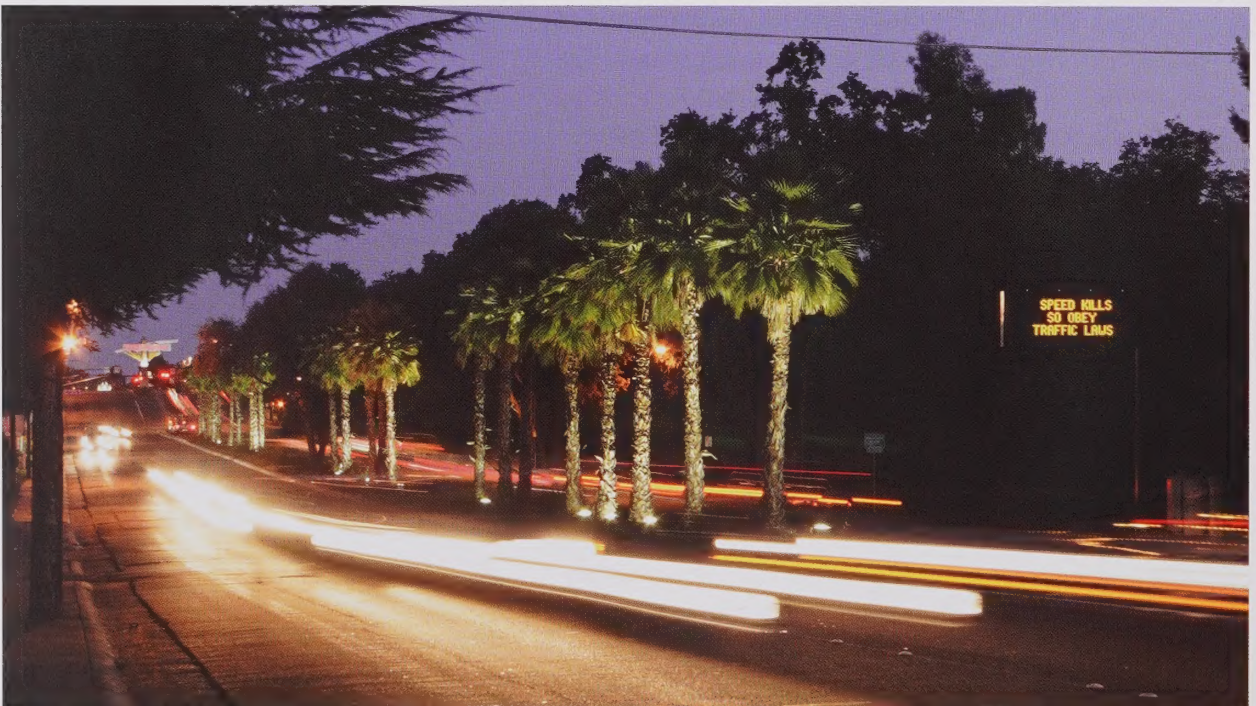
Collectively, SACOG operational planning efforts intend to provide strategies for the integrated management of travel modes and roadways focused on more efficient and effective mobility of people and goods within our most-congested transportation corridors.

**Computers, communications and roadway technologies, known as intelligent transportation systems (ITS), offer a cost-effective system**

**management strategy to improve traffic flow, transit operations, incident management, emergency response, pedestrian and bicycle movement, and traveler information.** Some common applications include roadway cameras, automated message signs, traffic-signal upgrades, transit-signal preemption, queue jumping, and bus rapid transit improvements.

Federal planning regulations require states and metropolitan regions to define in greater detail and seek to fund a logical system of integrated ITS projects. SACOG plays a coordinating role, so that ITS investments by various agencies can work together. SACOG is currently deploying a communications system called STARNET that enables various emergency response and traffic operations centers to work together more easily, and as a policy in this MTP, will consider funding local ITS projects as a high priority.

**ITS can optimize capacity on existing roadways and reduce the need for new or widened ones.** Corridors targeted for reinvestment in the region can consider ITS to handle increases in traffic, transit service, and pedestrian





and bicycle mobility, as envisioned in Blueprint, sometimes at less than a quarter the cost of adding new lanes. ITS features, particularly the timing of signals, can add 10 percent to 20 percent to road capacity at modest cost. Similarly, ITS features can be installed to speed-up buses and light rail travel. Investments can include traffic-signal timing to favor transit, traffic-signal priority technology that extends green lights as transit approaches, prepaid fare vending, and real-time next bus arrival times at transit stops.

**The region has an ITS vision to implement.** The region's 2005 ITS Strategic Deployment Plan includes improvements such as automated highway message signs, crosswalk signals with pedestrian countdown timers, real-time train or bus arrival time message signs (such as seen at BART stations), and intersection signal preemption for buses. The Plan identifies Smart Corridors, including Sunrise and Hazel Avenues in Sacramento, where near-term ITS strategies are planned by local agencies. These smart corridors include transit-specific enhancements such as transit signal preemption, queue jumping, and other bus rapid transit features, at an additional expense.

### ***Transportation Safety and Security***

**Improved maintenance of the region's transportation system also includes addressing safety and security concerns.** SAFETEA-LU calls for an increased emphasis to be placed on the safety and security of the transportation system. On a regional planning scale, three key areas of concern have been identified:

- the ability to plan for and react to natural disasters,
- the capability to respond effectively to man-made events, and
- the interoperability of various public safety communication systems.

Appendix C6 offers an expanded discussion of these key areas concerning transportation safety and security.



### ***Operational and Design Improvements to Increase Safety***

Safety issues in the Sacramento region involve all modes of travel, however, data reporting is limited and planning efforts have only recently been increasing. The 2006 approval of California's Strategic Highway Safety Implementation Plan (SHSIP) was an important step in guiding Caltrans' implementation of strategies statewide.

Highway safety is a challenge in both rural and urban areas of the Sacramento region. In rural areas, shoulders are limited along many highways and guardrails are lacking along many high-collisions locations. Key safety challenges along urban highways include narrow shoulders; roadside obstacles; short, tight ramps; and poor lighting and signage along older sections of urban freeways and highways.





Improving interchange and intersection safety for roadway users is a significant area of safety need. Caltrans maintains a list of unprotected highway and rail intersections, but very little federal or state money has been available to fund these types of improvements. Federal reauthorization legislation funding a new Safety Program starting in 2007 will improve the situation, promising funding for such neglected needs as safer rail grade crossings and urban interchanges.

Safety concerns for local roads largely center on intersection crashes and run-off-the-road collisions. Although drivers are often at fault, unforgiving roadway conditions can turn a simple crash into a fatality. It is hard to devise safety projects that will improve driver behavior, and the real contributing factors in crashes are often fuzzy. Safety projects are usually

more reactive, following a crash, but conditions for the next crash may come from somewhere else. Public agencies avoid identifying safety hazards, to reduce lawsuit risk, which hampers safety programs. Regardless, the public wants safer roads, and safety-related costs are high, for fatalities, injuries, lost work time and higher insurance premiums.

Local studies and the SHSIP reveal that safety gaps are also significant for bicyclists and pedestrians:

- Half of all pedestrian fatalities in the state were seniors over the age of 65 or youth under the age of 20.
- The National Highway Traffic Safety Administration publication, *Designing for Pedestrian Safety*, notes that crashes involving pedestrians have the highest crash risk of fatalities.
- Efficient roadway designs for vehicles often work to the disadvantage of bicyclists and pedestrians, especially at freeway interchanges and arterials with timed signals and shortened walk times.





## ***Incident Management Actions for Both Safety and Congestion Relief***

Incidents on highways and freeways are both a safety issue and a significant cause of congestion. Contrary to common belief, up to 50 percent of traffic congestion on freeways is not caused by lack of capacity, but due to incidents including weather, collisions, spilled loads and stalled vehicles. Through improving the response-time in dealing with these traffic problems—and ideally avoiding them altogether—the MTP could make immediate progress in increasing safety and reducing roadway congestion.

Incident management strategies can work on faster identification, quicker response and cleanup, and redirection of motorists to avoid the incident scene. Examples include freeway service patrols that quickly restore freeway lanes to traffic, implementation of Intelligent Transportation System (ITS) investments to monitor and track incidents, and enhanced 511 phone and Internet traveler information so drivers and transit riders can make smarter choices based on real-time information.

## ***Security Training to Prepare for Disasters Impacting the Transportation System***

The Sacramento region has a number of existing organizations, plans and infrastructure in place to provide for the security of the regional transportation system. Over the past few years, security programs have been sponsored by Caltrans, SACOG's Transit Coordinating Committee and federal agencies in the Sacramento area. Additionally, there are a number of current or pending efforts to plan for and respond to large-scale natural or manmade disasters and improve public safety communications systems. These efforts are especially important, given the region's risk for major flooding events.

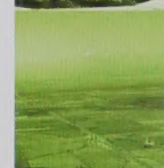


## ***Trip Reduction Strategies are Cost-Effective***

As traffic levels increase, collisions and other incidents tend to increase as well. Although crashes are typically less severe on congested roadways, even a small incident can quickly cause a large amount of traffic delay.

Programs to shift travel away from drive-alone may affect travel over a wide area at modest cost; for example SACOG's 511 and rideshare programs cost less than \$1 million per year regionwide to foster carpooling, transit ridership, vanpooling and bicycling in all corridors and areas.

Programs that lead to travel pattern changes—for example the Blueprint's compact development which shifts longer trips to local trips, or demand management to foster telecommuting and alternative work schedules—can take traffic off the road at peak hours for very little direct cost.





# Partners List

Sacramento Area Council of Governments • Amtrak Capitol Corridor Intercity Rail Service • Auburn Transit • California Department of Transportation • El Dorado County Transportation Commission • El Dorado County Air Quality Management District • El Dorado Transit • Elk Grove E-Tran • Feather River Air Quality Management District • Folsom Stage Line • KCRA 3 • Lincoln Transit • Paratransit, Inc. • Placer County Air Pollution Control District • Placer County Transit • Placer County Transportation Planning Agency • Roseville Transit • Sacramento Metropolitan Air Quality Management District • Sacramento Regional Transit District • Sacramento Transportation Authority • South County Transit Link • Yolo County Transportation District • Yolo-Solano Air Quality Management District • Yuba-Sutter Transit • Unitrans • Valley Vision

# Project Staff

## EXECUTIVE

Mike McKeever  
Executive Director

Gordon Garry  
Director of Research  
and Analysis

Peter Hathaway  
Director of  
Transportation Planning

Kenneth Hough  
Director of Community  
Planning & Operations

Karen Wilcox  
Director of Finance  
**MANAGEMENT**  
Matt Carpenter  
Manager of Transportation Planning

Bruce Griesenbeck  
Principal Transportation Analyst

Rebecca Thornton Sloan  
Manager of Public &  
Government Affairs

Olin Woods  
Manager of Capital Programs

## PLANNING

Gregory Chew  
Jason Crow  
David Ghiorso  
Jennifer Hargrove  
Clint Holtzen  
Kacey Lizon  
Robert McCrary  
David Shabazian  
Lacey Symons

## COMMUNICATIONS

Kent Giacomozzi  
Monica Hernández  
Erik Johnson  
Jason McNeill  
A.J. Tendick

## PROGRAMMING AND PROJECT DELIVERY

José Luis Cáceres  
Samson Okhade

## RESEARCH AND ANALYSIS

Pete Atwood  
Laura Bell  
Joe Concannon  
Luis Elizondo  
Tina Glover  
Jin Eui Hong  
Steve Hossack  
Raju Penmetsa  
Raef Porter

## SUPPORT

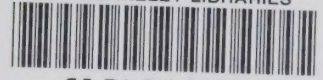
Daphne Chavarria  
Gayle Greene  
David Hodgson  
Penny McNamer  
Stacy Niccum  
Debra Overton  
Scott Overton  
Tara Scheiter

## TRANSIT

Jim Brown  
Edward Coviello  
Gary Taylor  
Barbara VaughanBechtold



U.C. BERKELEY LIBRARIES



C104718331

SACRAMENTO AREA COUNCIL OF GOVERNMENTS  
1415 L Street  
Suite 300  
Sacramento, CA  
95814

MTP2035

Appendices  
FOR THE MTP2035

Environmental  
Impact Report  
FOR THE MTP2035

A Creative New Vision

SACRAMENTO REGION  
MTP2035  
METROPOLITAN TRANSPORTATION PLAN  
THE NEXT STEP IN BLUEPRINT





1415 L Street  
Suite 300  
Sacramento, CA  
95814

tel: 916.321.9000  
fax: 916.321.9551  
tdd: 916.321.9550  
[www.sacog.org](http://www.sacog.org)

